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Original Articles.

SKIASCOPY AS A METHOD OF PRECISION.*

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It is difficult to realize how one may understand the theory of a method, and may employ it habitually in practice, and yet may attain results of insignificant value, as compared with what might easily be reached by a little more exactness. The difference between a loose method and a method of precision may be nothing in theory and trifling in detail, but enormous in practical usefulness. A scientific method becomes a method of precision, and attains practical value by comparatively slight modifications, but these may be made or adopted very slowly.

We can better understand how slowly by looking at the history of a diagnostic procedure that is now generally relied on. It is more than three hundred years since the invention of the thermometer. About two hundred years ago it was perfected in practically its present form by Fahrenheit. Yet physicians still in active practice remember the work of Andral and Wunderlich which made thermometry a method of precision in practical diagnosis, and led to its general adoption.

Take the clinical thermometer as we have it to-day, and the literature which now gives significance to its readings; but use it with neglect of a few precautions necessary to accuracy, and the observations made with it would be worthless. Drop precision from any modern method of examination and what a farce it would become. In no branch of modern science is minute exactness of greater importance than in the measurement of the refraction of the eye.

Skiascopy has been much written about and practiced of late years. It has given results that justify this. But by attention to certain details that would render it a method of precision, its practical value would be increased ten-fold. Skiascopy is a method of physical measurement. It is capable of exactly the same certainty as measurement by the rule or balance; and upon the same condition, exactness. Such statements as it "is not trustworthy when subjective methods are possible with intelligent people," or "it is sometimes misleading," indicate merely the carelessness with which it has been used. If your thermometer be falsely graduated, or your tape measure stretches freely, and you do not know enough about them to appreciate the dangers of such inaccuracies, you may be misled by them. If you measure by skiascopy the periphery of a dilated pupil, never used in vision, and do not know that its refraction is totally different from that of the visual zone at the center of the pupil, you may be misled by skiascopy. The shadow test is trustworthy enough. It is ignorance, haste, carelessness, inexactness that are untrustworthy.

It was inevitable that this method of examination should pass through a period of development. The ophthalmoscope, which came as near being a complete discovery as any we have had, has grown enormously in practical value since its introduction. For skiascopy this stage of development has not yet passed, but it has gone far enough for us to place the shadow-test among our methods of precision. The time for being content with a general comprehension of its theory, and teaching it in a rude, diagrammatic way has passed. Recognition of it as a practical test should be given henceforth only as it takes the form of a method of precision. If one has no tape measure he may estimate length by spanning with his hand or counting paces. If the conditions for accuracy are for the time impossible, one may practice approximate skiascopy. But it should be recognized that this is not all that skiascopy might be.

The first step toward rendering skiascopy a method of precision is the shortening of the distance between the patient and surgeon. We do not try to recognize the diplobacillus or the gonococcus with a magnifying power of two hundred diameters or less. Why should we try to practice skiascopy at the distance of one meter, where it is impossible to recognize appearances which must be recognized in order that the skiascopic determination of the refraction shall be accurate?

The shadow-test is practiced with a pupil of from 4 to 8 mm. in diameter. A letter inscribed in a circle of that size would be recognized at a distance of 2 to 4 meters in a good light. With the strongest illumination of the pupil the movements of light and shadow can be recognized readily at the same distances. But the strongest illumination is not available for accurate skiascopy. The conditions which give the most brilliant reflex from the pupil differ essentially from those under which the refraction can be exactly measured. As the point of reversal is approached the illumination of the pupil becomes feeble, and for a fair approach to exactness, say within 0.25 D., the light in the pupil becomes so feeble that the direction of its movement can not be recognized at one meter, even when the movement extends over the whole width of a pupil 6 or 8 mm. in diameter. Skiascopy at one meter can not be certain. The correctness of measurements made at that distance can not be relied on. They may be accurate by chance, but they are not accurate with certainty.

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

Moreover, in the great majority of eyes, the movement of light and shadow has to be determined, not in the area of the whole pupil, but in an area much smaller, a circle of 3 to 5, instead of 6 to 8 mm. in diameter. Then in this smaller circle one has to watch the movement of a comparatively dim light area, while around it a larger and more brilliant area is also moving. The folly of getting so far away that it is difficult or impossible to recognize this important central movement, has greatly lessened the practical value of the shadow-test.

The reasons that this folly has continued so long, and has been so general, are not difficult to imagine. If you wish to make skiascopy a method of precision, you must be careful as to all its details. The source of light must approximate as closely as possible a mathematical point. The distance between surgeon and patient must be measured exactly. But if the surgeon goes far enough away from the patient's eye, it makes very little difference whether his source of light be large or small, and he need not measure the distance from the patient at all, but merely guess at it or make a fixed deduction.

If skiascopy is not to be a method of certainty and precision, but only a rough and approximate test, the loose, easy, careless way of practicing it will answer. But it ought to be generally understood that this loose method no more exhausts the possibilities of skiascopy than did the old methods of the alchemists exhaust the possibilities of the chemical examination of urine.

The time will surely come when our profession will appreciate the value of an objective method of exactly measuring refraction, and will hold in light esteem the scientific judgment of a generation that failed to appreciate that value. But until such a method of precision is appreciated, not even the most reasonable and obvious of its essential conditions is likely to be generally observed.

The need of measuring the distance between surgeon and patient has already been alluded to. When the distance is so great that a foot added to it will mean but 0.25 D. difference in the refractive power, such measurements are unnecessary. But when a single inch means more than 0.25 D. of refractive power, the need for exactness is obvious.

The size of the retinal light area obtained with a certain source of light is inversely proportioned to its distance. If the source of light be kept of the same size and brought nearer to the patient's eye, the delicacy of the test will be diminished rather than increased because of the enlarged retinal light area. A source of light 1 cm. in diameter, used at ten inches, will be as inaccurate as a source 4 cm. in diameter, at one meter. For working at one-quarter meter we must reduce the diameter to 2.5 mm. or less. The need to give the sight-hole a sharp edge and circular form is generally appreciated. It becomes even greater as skiascopy is rendered a method of precision.

The reduction in the size of the source of light renders necessary a reduction in the sight-hole, to prevent the reflected light point from being largely or completely swallowed up in it. The sight-hole should be not more than half the diameter of the source of light. Of course, with such a sight-hole its freedom from reflection, which should always be aimed at, is essential.

When skiascopy has been developed and modified in these respects, still other things assume practical importance. The room must be thoroughly darkened. The more delicate movements of the faintly illuminated area in the pupil can only be perceived when the surgeon's retina has become adapted to a faint light. Then, too, this faint illumination must not be overcome by reflexes from the trial lenses in front of the patient's pupil. The light must be so thoroughly cut off that no reflection of the surgeon's hand, or face, or other object can interfere with the watching of the pupillary movement.

To get the rays entering through the patient's pupil accurately focused on the retina, the source of light has to be brought as close as possible to the mirror, and this position brings it also comparatively close to the patient's face. When the distance between surgeon and patient is reduced to 12 inches or less, this renders worth while a double metal shade, which will prevent unpleasant heat from the flame.

To fix exactly the principal meridians of astigmatism, special arrangements are required. The correcting cylinder turned to its proper meridian often serves the purpose. But for higher degrees of astigmatism (more than 0.50 D.) the wire stretched in front of the pupil, as suggested by Finch, is more satisfactory.

So many of these points must be attended to if we would render skiascopy a method of precision, and so interdependent are they, each losing most of its value when not used in connection with the others, that it seems proper to recognize a special form of the shadow-test as exact skiascopy. This we can do while fully appreciating that in essential theory and general character it is identical with the shadow-test in general. It is distinct in the sense that perimetry is distinct from measuring the field of vision with the fingers or by other methods; or as the refraction of the ophthalmoscope is distinct from the original Helmholtz or Liebreich ophthalmoscopes.

We would indicate by the term exact skiascopy:

The working at a distance of one-quarter to one-half meter.

The accurate measurement of the distance.

The adaptation of the source of light and the sight-hole to this distance.

Care to bring the source of light close to the conjugate focus of the retina.

Means of fixing exactly the direction of the principal meridians.

Control testing, by departure both ways from the lens' strength, focal distance, or meridian fixed on.

And, in general, precision and exactness in every detail.

Such a method of examination is capable of sufficient accuracy for ordinary practical purposes. It will fix the error of refraction within one-quarter diopter, and in many eyes within one-eighth diopter, and the direction of astigmatism within 5 degrees when the astigmatism amounts to 0.75 D. or over, and within 15 degrees when it is only 0.25 D.

In recognizing the fact that skiascopy will not determine the refraction of all eyes with equal accuracy, it must be remembered that this is true of all methods of measuring refraction, and most true of those that give the most exact results, especially the subjective test with trial-lenses and test-letters.

It is not admitted that skiascopy is in this respect inferior to other methods. As a matter of fact, it can be relied on more completely than any other method now in use. Having made the skiascopic examination, one can judge far better of the amount of confidence to be placed in its results, than he can judge of the value of the

results obtained by the subjective methods or with the refraction ophthalmoscope. The illuminated pupil shows not only a certain error of refraction; it shows also whether the refraction is the same throughout its whole area, or throughout a definite visual zone. If this be not the case, so that some uncertainty attaches to the measurements made in any particular case, exact skiascopy reveals this fact also, and thus guards against undue confidence in its own findings.

DISCUSSION.

DR. O. A. GRIFFIN, Ann Arbor, Mich.—Subjective tests are certainly unreliable in a great many instances, and to secure satisfactory results other methods must be employed. When we remember that 90 per cent. of ametropes are astigmatic, one-quarter diopter or more; that a sphere will improve vision in astigmatic conditions up to about one-half of the measure of the error, and that normality of sight does not exclude the existence of small refractive errors, especially astigmatic, we must depend on a more reliable method than that furnished by the uncertainty of a patient's judgment.

It is important, as Dr. Jackson has indicated, that we follow the method in all its details in order to secure accurate results. I often find refractionists disappointed with the method simply because they do not understand how to use it. Instead of watching the movements of the shadow in a small central area, they observe the cornea as a whole. In some cases where there is an unusual amount of spherical aberration the scissors-like movements of the shadow will prove annoying, when the peripheral movements should be ignored, as the rays do not pass through this area when the pupil is normally contracted.

I am somewhat surprised that Dr. Jackson discredits the accuracy of results obtained at one meter. I make all my estimations at that distance, and in the majority of instances can easily differentiate between a quarter and eighth diopter of error. There are cases where we meet with opacities of the media or sufficient irregular astigmatism to interfere with the test; but fortunately these conditions are rare, and do not interfere enough to condemn the method.

It is, I think, in the correction of strabismic ametropias that skiascopy proves of exceptional value. If strabismus is produced by ametropic conditions, then it is imperative that these errors should be corrected early. If one depends solely on subjective tests, as is too often the case, the ametropia can not be properly estimated until the child becomes old enough to read, by which time an irreparable amblyopia has often occurred, whereas with the skiascopic test the condition can be corrected as soon as it shows itself. I have often employed the method in refracting children of tender years, and think it exceedingly fortunate that we have such a reliable objective test at our command. The statistics show, I believe, that fully one-third of strabismic conditions can be remedied by an early correction of the ametropic condition alone. If this be true, the importance of objective tests can not be overestimated.

DR. HAROLD GIFFORD, Omaha—I do not understand why the author speaks of the visual "zone." Why not call it visual area instead of visual zone. This area is not a belt around a sphere, as that name would indicate, and the area is often not even circular.

DR. WM. H. WILDER, Chicago—Although I appreciate the value of the method of skiascopy advocated, and while there is no question of the method being the most accurate means of testing the refraction, it seems to me in most cases an unnecessary refinement because of being more laborious. I am sure that anyone with care and skill at a distance of one meter can get as close as a quarter diopter to the refraction of almost every case. I feel satisfied whenever I am within a quarter diopter of the actual truth. That is close enough for all practical purposes, for with that you can prescribe with safety in children unable to read. Of course, the subjective test at the reading chart is the final one. I make use of the concave mirror, with the light behind the patient's head. The error is only slight at a meter as compared with that which may occur at a distance of 20 to 30 centimeters.

DR. C. W. HAWLEY, Chicago—I think perhaps some will misunderstand Dr. Jackson's paper. I do not believe he means that for practical work the examination must be done with the accuracy of which he speaks, but that he is pointing out the manner in which it must be done in order to correspond scientifically with other methods of accuracy. I know it can be depended on. A distance of one meter is what most of us use, but we find that sometimes we must get a little nearer or a little further away; that is a matter learned only by experience. As to the correction of one's own error of refraction, that is a matter of special importance to older men. A man who is a presbyope must correct that condition up to the distance at which he works. That I have learned by my own practical experience. While in London a certain physician gave it up in disgust, and I have never known until the last few years why he did so; it was because he was a presbyope and had not corrected that condition. When I became a presbyope I began to get very inaccurate, and could find no reason for it, when it dawned on me one day to correct my presbyopia, and it was a revelation to me. At about the same time I taught one of my friends to use the method. He was very much like my friend in London and was about to throw it aside. I asked him if he had tried using his glass correcting his presbyopic condition, and he said he had not. He had his lens placed at the back of his mirror and now does retinoscopy with pleasure and accuracy. Place on the back of your mirror a little frame for the lens, or have a permanent lens correcting the presbyopia at the distance at which you ordinarily do retinoscopy attached to the mirror. Those who have a large amount of astigmatism and hypermetropia must, of course, do the same.

DR. EDWARD JACKSON, Denver—With reference to the point raised by Dr. Hawley as to the correction of presbyopia, of course the correction of one's own error is only important as giving him distinct vision. When we attempt to use the method with accuracy we work up to the limit of visual acuteness and must have perfect vision to get the best results. As for myself, I have trouble with the ocular muscles more than with the accommodation. I find the illuminated pupil getting off on the brow or cheek as seen with the other eye. I have sometimes thought of adapting a prism behind my mirror as Dr. Hawley has adapted the lens. A small amount of presbyopia may give trouble.

As to Dr. Gifford's remark about the visual zone, I think zone may be used to designate that kind of an area. It is a circle within a circle. It is a circular area around the axis which I refer to as the normal visual zone.

As to the matter of working at a distance of one meter: You can not be sure of the amount of astigmatism within a quarter diopter at that distance. You may determine it in many eyes, but not in all. If you want to be accurate in every case it will be worth while to use the method which can be most accurate and most easy. At a half meter or less you can recognize everything more readily. The observed pupil is three or four times the area that you get at one meter. Perhaps the most important thing is the fixing of the axis of astigmatism, especially of low degrees. For that we have no other method approximating in exactness this method of skiascopy.

Local Treatment of Rheumatism.—Testimony is accumulating in our European exchanges that the local application of the methoxymethylester of salicylic acid has a remarkably soothing effect on rheumatic pains. In cases of rheumatism due to getting chilled the pains are banished by rubbing the part with a teaspoonful or tablespoonful of the drug, either pure or in a 50 per cent. oily solution. In obstinate cases of rheumatism it effectively supplements internal salicylic medication and relieves even chronic, hopelessly rebellious cases. It has not proved effective in neuralgia, but has been very useful in the declining stage of acute articular rheumatism, etc. It is put on the market under the name of Mesotan.

RETINAL DISEASE LIMITED TO THE REGION OF THE FOVEA.*

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In the course of years there have come under my observation five instances of disease of the retina sharply limited to the fovea and its immediate neighborhood. As I am not aware of any similar observation on record the cases seem to me to be worth reporting on account of their diagnostic interest. The only analogous disease resembling this affection is the central retinitis with scotoma caused by sunlight; for instance, while watching an eclipse. Since the cases observed by me were alike merely in localization, but different in clinical course and presumably in etiology, I see no object in generalizing, but shall only comment on the individual observations.

ACUTE CENTRAL RETINITIS WITH RECOVERY.

CASE 1.—Mr. N., a man of 45 years, in good health except for some dyspeptic symptoms, had complained lately of beginning presbyopia. He awoke one morning and saw a shadow in front of the left eye with slightly blurred sight. Two days later I found the sight in left eye 20/50, in right eye normal with a weak cylinder. He drew the brown shadow in the form of a horizontal ellipse with sharp outline extending about 3 deg. to the temporal and 6 deg. to the nasal side of the point of fixation. Within the scotoma all colors appeared faded. The fundus was not absolutely normal in both eyes. The papillæ were more injected than normally in both eyes and their edges not sharply defined. The central area of both retinæ showed a number of barely visible minute white but not glistening specks irregularly scattered. In addition, there was seen in the left eye and not in the right, a distinct though faint cloudiness of the region around and especially above the fovea. Media normal. Pilocarpin was ordered once a day, and a mild purge of calomel every second day.

Within the next ten days the shadow grew fainter, although it expanded a trifle at first. His sight rose to 20/30. The retinal cloudiness cleared visibly. About one week later (2½ weeks after the onset) the eye seemed to him normal. Three months later the retina of the left was as normal as that of the right eye. Both still showed the few white specks, but the optic discs were practically normal. His sight, corrected by cyl. +0.75, was 20/20 minus. No relapse after several years.

The lesion in this case was evidently an exudate in the anterior layers of the retina. For a shadow seen subjectively, or in other words, a positive scotoma, can only be caused by an opacity anterior to the sensitive layer of the retina. The retinal infiltration as seen by the ophthalmoscope appeared more diffuse than the sharply-defined scotoma. It seems logical to call the lesion a central circumscribed retinitis. Nothing could be ascertained as to its cause or the reason of its localization. It is impossible to say to what extent the recovery depended on the treatment. My general experience in various forms of neuritis and retinitis leads me to credit the calomel largely for the success, while I have lost all faith in the efficacy of pilocarpin.

ACUTE CENTRAL RETINITIS WITH RECOVERY, BUT SUBSEQUENT RELAPSE.

CASE 2.—Mr. S., active business manager, in good health, 55 years old, noticed one day a small brown shadow before the right eye with a heavy feeling and slight blurring. Two weeks later I found the left eye normal subjectively and objectively. The sight of the right eye was barely 20/40, while it had formerly been 20/20 minus with cyl. +05D. He draws on paper the circular outline of a shadow of about 4 deg. radius. The center of the retina of the right eye showed two oval spots, one above the other (like a figure 8), each about one-sixth of a papillary diameter, yellowish, sharply defined, but very faint and surrounded by a zone slightly darker than the rest of the fundus. Fovea as such not visible.

After a dose of calomel and the use of dark glasses vision rose to 20/30 in two days. He was unable to tolerate iodin, but took a few more doses of calomel. Within two weeks the shadow was gone, vision was normal and the morbid figure in the retina could scarcely be recognized.

Eighteen months later the same shadow reappeared in the right eye and vision again dropped to 20/30. The ophthalmoscope showed a yellowish discolored spot again involving the center of the retina, more irregular in outline than before, about one-fourth papillary diameter with more pigment granules in it than formerly. Again the shadow and blurring disappeared almost completely in two to three weeks under the use of calomel every second or third day, but the fundus lesion did not change. He told me subsequently that his vision was normal, but that a very faint shadow was still noticeable. I got no opportunity, however, to examine him with the mirror.

The comments made on Case 1 apply equally to this patient. The lesion, however, appeared different ophthalmoscopically, probably on account of some changes in the retinal pigment epithelium. The following case resembles Case 1 more closely, but unlike the other two, did not end in recovery:

CASE 3.—Mr. B., 40 years of age, healthy and with negative history, claims to have noticed a shadow with blurring about six months ago. He was treated by another oculist without improvement. The affected eye (the other being normal) has V.=20/50. He describes a gray shadow nearly crescentic and just below the point of fixation. It did not seem to be quite 5 deg. wide as indicated on the perimeter. The retina showed a fairly circumscribed grayish cloudiness, approximately semicircular, upward from the visible fovea. I did not see the patient again.

In all these instances the lesion was evidently of inflammatory origin and involved only one eye. The next case, however, showed symmetric lesions in both eyes. Neither the nature nor the time of occurrence of the disease could be learned, since only its permanent residues were seen.

CASE 4.—Mrs. S., now 37 years old, has always had poor sight, especially in the evening. Either eye has but 20/200 vision. According to all objective as well as subjective tests cyl. —2.5D. axis 110 deg. with sph. +0.75D. corrects the right eye perfectly and C.—1.75D. axis 90 deg. with sph. +0.75D. the left, but with this correction she scarcely reaches 20/100. The only anomaly shown by the ophthalmoscope is a very faint but unmistakable central lesion. The fovea as such is not recognizable in either eye, but on central fixation the foveal region, about ¼ papillary diameter, is seen a brighter red than the rest of the fundus, perhaps more so by reason of contrast, as this light red area is surrounded by a narrow zone of abnormally dense pigmentation.

The poor sight of this patient could not be accounted for by any optic reason, but is evidently explained by damage done in the center of the retina by some former possibly pre-natal disturbance. There was neither a positive nor a negative scotoma demonstrable, but simply imperfect function of the foveal region with integrity of color sense and of peripheral acuity of sight.

The last observation pertains to an insidious degenerative disease, also limited to the exact center of the retina.

CASE 5.—Mr. S., 42 years old, and in perfect health, was seen in October, 1894, on account of slight asthenopia and imperfect sight. The findings were: R. E., V.=20/70, with —0.75D. and cyl. —0.5D. axis 100 V.=20/30; L. E., V.=20/80, with —1.5D. and cyl. —1.D. axis 60 V.=20/20 minus, which glasses were given. Four years later slight failure of the

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right eye caused him to return, when the corrected sight was found to be only 20/40. In 1899 it was not quite 20/50, without any change, however, except presbyopia in the left eye. At all these occasions a painstaking ophthalmoscopic examination, however, without dilatation of the pupil, revealed no anomaly. In November, 1901, after an interval of seven years, the sight of the right eye with full (unchanged) correction had sunken to 20/70. On dilating the pupil the only lesions to be seen were slight opacity in the extreme periphery of the lens and two spots each under ⅛ papillary diameter, one occupying the site of fovea, the other almost adjoining it. The spots were poorly defined, faint yellow in color, with scarcely noticeable increase of retinal pigmentation at the periphery.

There was in this case at no time any sudden disturbance of sight. The lesion was evidently of degenerative character, and of slowly progressive nature.

DISCUSSION.

DR. W. L. DAYTON, Lincoln, Neb.—The first two or three cases mentioned by the essayist simulate the changes at the macula that may occur with senility. The age of his patients, however, would not naturally warrant us in assuming this, yet I do not remember that he spoke of the refraction. It is possible even at that age that a very hyperopic eye might have some influence on this condition inasmuch as the changes in the fovea from senility undoubtedly occur in the nerve and pigment epithelium of the retina, and it appears to me possible for such changes to occur in the cases stated. I had a case somewhat similar to this third one under observation several years ago; a case of pernicious anemia, where the spot appeared to me as if it had been a hemorrhage of long standing—not black, but more of a reddish brown. The patient succumbed to the pernicious anemia. In retinal disease limited to the macula lutea there are a number of conditions that should be carefully studied. There are cases where foreign bodies have entered the vitreous and where some weeks afterwards there appear changes in the macula. This is important, too, because we may have to deal with the condition from a medico-legal standpoint, as bearing on accident insurance, etc. The changes may not appear until some weeks after injury, or extraction of a foreign body. We may find no evidence of foveal disturbance, and then after the eye has assumed its normal condition find changes about the fovea. We may think that we have to deal with a malingerer, and then a month or so later these macular changes be very evident. I have in mind a case where such changes about the fovea occurred, yellowish-white in appearance, three months after the injury. Then, as Dr. Gradle has said, there are changes in the macula in retinitis due to the effect of electric light, and there we get a similar condition. There is another condition that I would mention in this connection, and that is where there is but little disturbance of vision and where the ophthalmologic appearance is that of small white dots. This condition may not reduce vision to more than 20/25, and yet present this peculiar appearance. I have never been satisfied as to what the condition is.

DR. LEARTUS CONNOR, Detroit—I have observed a somewhat different case, in a physician 40 years of age. The history showed at a previous examination a healthy eye, until within two weeks of the time I saw him, when suddenly in his left eye central vision disappeared; peripheral vision was normal. A peculiarity he described was this: that this spot which he saw was alive, and he described and drew on paper the various movements observed subjectively; their outline was oval in shape, progressing from the center toward the border in all directions. The drawing I made from the ophthalmic picture corresponded with that made by the patient. Two months later his central vision had become 20/200 and was apparently improving. Evidently it had involved the entire structure of the retina and the cellular elements were in a state of activity during that period. Whether treatment had any effect or not I do not know. He had been a perfectly healthy man with no constitutional taint, but he had overworked while neurasthenic.

DR. C. W. HAWLEY, Chicago—I was much interested in the paper because it calls to mind three cases I had thought of reporting. The conditions about the macula are not exactly like those described by Dr. Gradle, except in one case. The three cases occurred in ladies and came under my observation some two or three months apart. The conditions about the macula were very much like those which occur in albuminuric retinitis less the hemorrhages. I treated the first case for some time and without much improvement. It finally passed into the hands of an irregular practitioner, was treated for constipation and the patient returned home cured, the macula having returned to its normal condition. The next case was similar and I turned it over to a general practitioner, with the same result. He treated the intestinal tract and the condition cleared up. The third case was very much the same, and all three were treated as to the intestinal tract. No investigations were made as to what the nature of the poison was, but I am sure the condition resulted from the intestinal poisoning.

I understand that Moses Gunn has described some cases very similar to these. I am sure Dr. Gradle's success is due to the doses of calomel he gave.

NEUROGLIA TISSUE AND EPENDYMAL EPITHELIUM IN TERATOID TUMORS.*

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In pathology the advances by which our knowledge of any subject is obtained often take the form of a wave. An epidemic occasions renewed interest and furnishes abundant fresh material; a new technical procedure stimulates investigation and invites the reëxamination of accumulated material: the result is a series of contributions revealing new facts concerning the subject. Such a period of activity was inaugurated in the study of neuroglia tissue by the publication in 1895 of the staining methods of Weigert[1] and of Mallory.[2] Since then has come most of our knowledge of this tissue. Many investigators have been engaged on its problems, and other staining methods have been introduced, but none of these differential methods appears to have been applied to any extent in the examination of similar elements in teratoid tumors. In a teratoma of the ovary, some features of which have already been published,[3] a large amount of neuroglia tissue was found. This finding occasioned the investigation of other tumors of this class with particular reference to neuroglia elements. As in these tumors structures related to neuroglia occur and by the application of various neuroglia staining methods other elements than neuroglia fibers are brought out, it has seemed well to consider all of these in this study. Hence neuroglia fibers, neuroglia cells, ependyma, dots and fibers which stain by the neuroglia staining methods and retina-like structures will here be described and their significance discussed.

Teratoid tumors have from earliest times received much attention. A great variety of forms has been de-

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1. Weigert: Beiträge zur Kenntniss der normalen menschlichen Neuroglia, Frankfurt a. M., 1895.

2. Mallory: Ueber gewisse Färbereactionen der Neuroglia, Centralbl. f. allgemein. Path., 1895, vi, 753.

3. Christian: Ependymal Epithelium as a Constituent of a Teratoma, Medical Reports of the Boston City Hospital, 1902, xiii, 161; Boston Med. and Surg. Journal, 1902, cxlvii, 673.

scribed and all kinds of tissue, including the elements of the central nervous system, have been found in them. Their rate of growth and the symptoms due to their presence in various regions have been investigated. The contributions made to the various aspects of the subject have been reviewed repeatedly and it is not necessary to do so again at this time when it is our intention to consider mainly the histology of the neuroglia and of the ependymal epithelium in some of these tumors.

There were available for this study twenty teratoid tumors preserved in a way suitable for the application of neuroglia staining methods. Of these, 18 were from the ovary, one from the lung, and one from the anterior mediastinum. The tumors vary much in size and shape. Some consist of a single cyst with a solid ingrowth; some are solid cystic structures; others a combination of the two. All contain islands of bone and cartilage, some teeth. In six neuroglia was found. Of these, tumors 1, 2, 4, 5 and 6 arose in the ovary, tumor 3 in the lung. However, the possible presence of neuroglia in the others can not be denied, as it is manifestly impossible to exclude small areas of neuroglia except by serial examination of the tumor and this for such large tumors would be excessively laborious. For this reason and owing to the comparatively small number examined, these observations have no statistical value as to the frequency of the presence of neuroglia elements in teratoid tumors. They do show, however, that this tissue is of quite frequent occurrence in tumors not specially selected for complexity of structure.

Material from all of these tumors was fixed and preserved in 10 per cent. of formaldehyd. From some material was fixed in Zenker's fluid and preserved in 80 per cent. alcohol. Material fixed in formaldehyd was stained by Mallory's phosphotungstic acid hematoxylin method,[4] Mallory's modified fibrin method,[5] and Huber's modification of Benda's method of staining neuroglia.[6] That fixed in Zenker's fluid was stained by Mallory's anilin blue connective tissue stain[4] and the acid fuchsin potassium permanganate method very recently introduced by Mallory.[7] A number of variations and modifications of these methods were also employed and gave some interesting pictures. Besides these, alum hematein and eosin, or eosin and Unna's alkaline methylene blue were used. As many of these methods as possible were utilized in the study of each tumor.*

Neuroglia tissue is most abundant in tumor 1. The tumor consists of a single large cyst, with epidermal lining and an equal amount of tissue containing innumerable cysts, varying in size from very minute ones to those measuring several cm. in diameter. Between the cysts the neuroglia is scattered in masses of varying size and shape. None of these exceeds 1 cm. in greatest diameter. Most are very much smaller. Many of the areas are sharply circumscribed from the surrounding connective tissue. Into others strands of connective tissue penetrate or, on the other hand, a band of neuroglia makes its way for some distance from an otherwise sharply contoured mass into the surrounding connective tissue. Less often there is so intimate an intermingling along the border of the two tissues that the limits of the neuroglia can with the greatest difficulty

Fig. 1.—Corpora amylacea in neuroglia tissue.

be made out. In some sections single fibers or groups of several parallel fibers which resemble neuroglia fibers are found in the midst of connective tissue. These fibers are either fine or coarse, and have the same general direction as the surrounding connective tissue fibers. They may bear no relation of continuity to any mass of neuroglia tissue, and may be unaccompanied by any cell dif-

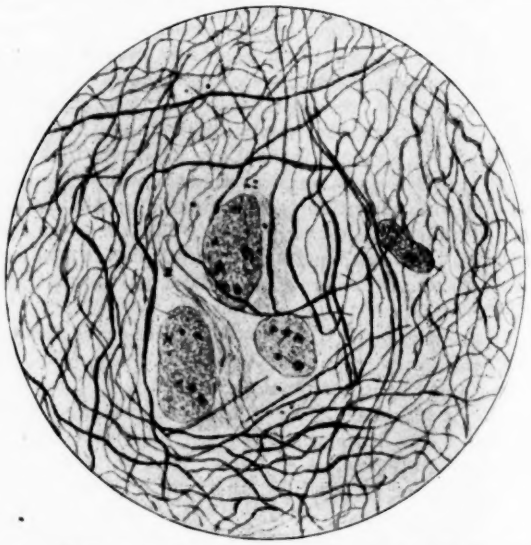

Fig. 2.—Meshwork of neuroglia fibers, some coarse, some fine. Four neuroglia nuclei, two of which are eccentrically placed in a distinct cytoplasmic body. In the cytoplasm of one of these is a "dot" near the nucleus.

fering in appearance from the ordinary type of connective tissue cell.

The relation of the neuroglia to the cysts varies. Many neuroglia masses are entirely separated by connective tissue from the cysts. Others abut on or project into cysts. Some cysts are completely surrounded

4. Mallory: A Contribution to Staining Methods, Jour. of Exp. Med., 1900, v, 15.

5. Mallory and Wright: Pathological Technique, Philadelphia, 1901, 328.

6. Huber: Studies on the Neuroglia, Am. Jour. of Anat., 1901, i, 45.

7. Mallory: A Hitherto Undescribed Fibrillar Substance Produced by Connective Tissue Cells, read at a meeting of the Am. Assoc. of Pathologists and Bacteriologists, Washington, D. C., May 14, 1903; to appear in Journal of Medical Research.

* Weigert's method of staining neuroglia was tried, but satisfactory results could not be obtained. This may have been due to the fact that the tumors were not hardened soon enough after removal from the body or that the reagents used by me differed in some way from those originally employed by Weigert. On this account deductions made by me in regard to neuroglia staining methods are not to be taken as applying to the Weigert method.

by neuroglia. There may be a large cyst with a comparatively thin layer of neuroglia about it or cysts of varying size may lie in the midst of large masses of neuroglia. Where the neuroglia is adjacent to a cyst it may be naked or covered by epithelium. The epithelium covering the neuroglia is of two general types. The one is flat cuboidal and lies immediately on neuroglia fibers, though none penetrates between them; the other is of high cylindrical type, and between these neuroglia fibers often penetrate to a varying distance. Between these two types of cells are intermediate forms.

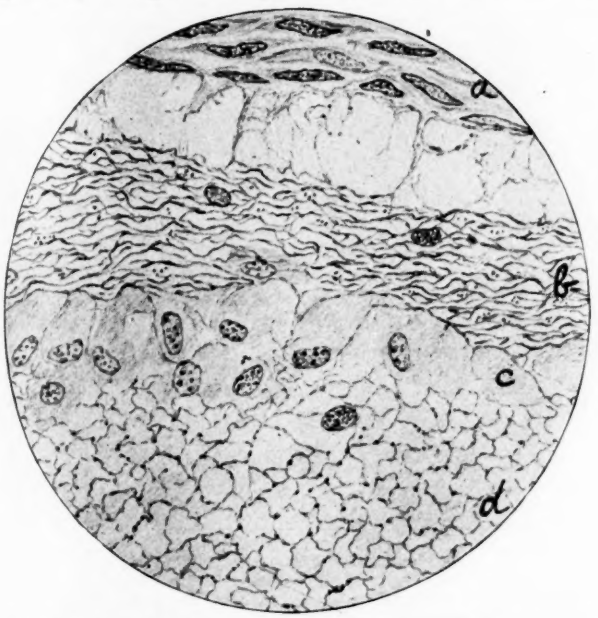

Fig. 3.—Neuroglia tissue. (*a*) Band of surrounding connective tissue. (*b*) Band of quite fine neuroglia fibers in general, running longitudinally and enclosing few cells. Between (*a*) and (*b*) there is a space due to shrinkage of tissue. (*c*) Layer of large neuroglia cells with eccentric nuclei. (*d*) Loose meshwork of fine neuroglia fibrils enclosing few cells. In this figure the dots represent cross sections of fibers.

Tumor 1 shows greater complexity of neuroglia structure than the others. In tumor 2, with the same division into a large cyst and a solid portion, as in tumor 1, much less neuroglia is present. The solid portion of this tumor consists largely of small irregular cavities and spaces, into which project papillary processes covered by high cylindrical epithelium containing goblet-like cells. In this respect it resembles a papillary adenocystoma of the type which is very common in the ovary. Besides this structure, in a few places are small cysts whose walls are lined by neuroglia. Tumor 3 shows numerous cysts, but the neuroglia tissue bears no close relation to these. It is sparingly present as small, irregular masses lying in connective tissue and sometimes abutting on a cyst.

Fig. 4.—Coarse neuroglia fibers ending in an expanded foot adjacent to a hyaline band of connective tissue. From base of so-called rosette.

In tumor 4 the neuroglia is present in relatively large masses. In one of these masses there is a central elongated cavity, which is not lined by epithelium. From this larger mass, bands of neuroglia extend into the surrounding tissue. In many places there is a very intimate intermingling of neuroglia and connective tissue fibers. In other places the two tissues are sharply demarcated. Tumors 4 and 5 each consist of a large cyst, whose wall is not very thick. In this wall lie small, rounded masses and elongated bands of neuroglia. In one of the tumors numerous corpora amylacea of irregular size and shape are present in the neuroglia tissue (Fig. 1). In tumor 6 a single mass of neuroglia measuring 3 to 4 mm. in diameter is seen.

Fig. 5.—Part of a cyst lined by irregular cuboidal cells. In inner border of these are groups of "dots." In vicinity of cyst there is no neuroglia tissue. Section cuts cyst obliquely.

In the smaller neuroglia masses of all these tumors blood vessels are generally not present. In the larger masses they are found in moderate number and surrounded by a slight amount of connective tissue.

The appearance of the neuroglia in different areas is very various. The fibers differ in size and direction, the cells in form and frequency, and these differences are combined in an almost endless variety of ways. On the one hand we have masses of cells with but few fibers, on the other hand masses of fibers with infrequent cells. In neither extreme is the picture similar to that found normally anywhere in the central nervous system,

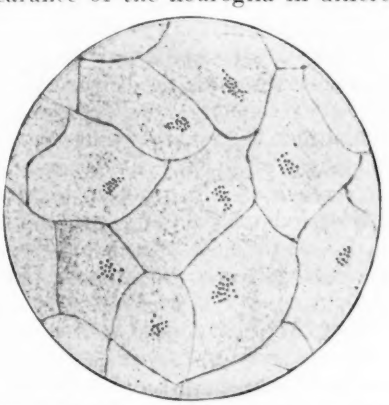

Fig. 6.—Groups of "dots" situated in the central end of cells lining a space. Section cut so as to give a view looking down on the top of the cells. Pale halo about some of the groups.

though both resemble types of gliomata. The most frequent arrangement is a coarse irregular meshwork of fibers, some fine, some coarse, crossing each other in all directions (Fig. 2). Scattered among these fibers cells are rather infrequent.

Instead of this arrangement, in many places, espepecially at the periphery of neuroglia masses, there is a more regular compressed meshwork of fibers having, in general, a parallel course (Fig. 3, b). Here nuclei are less frequent. Where these fibers are fine, the structure resembles that of the normal subpial and subependymal neuroglia.

A further modification in this direction results in bands of fibers, almost all of which run in the same direction and have practically a parallel course. In one or two instances these fibers are quite coarse and are interspersed with cuboidal cells roughly arranged in columns. This bears a slight resemblance to the arrangement of cells and fibers sometimes seen in tendons.

In places, instead of the interlacing fibers at first described, we have a finer meshwork of more delicate fibers and rather indefinite granular material, with nuclei widely scattered and generally having but little cytoplasm (Fig. 3, d). This arrangement of neuroglia fibers is similar to that found in many parts of the cerebral cortex.

The individual neuroglia fibers do not vary in diameter in different parts of their course and do not branch. Different fibers vary greatly in size. Some are very fine, others coarse, and some appear as narrow bands. In many areas the fibers are of approximately the same size (Fig. 3). In some the fine and coarse are mingled together (Fig. 2). For most fibers no definite method of ending is apparent; they apparently end abruptly or pass from the level of the section. Some, like those in the so-called rosettes, to be described later, end by an expanded foot applied to connective tissue (Fig. 4).

The cells, like the fibers, present a variety of appearances. Many have rather small, deeply staining, round nuclei, about which little or no cytoplasm can be made out (Fig. 3, b). Some, on the other hand, have abundant cytoplasm, though when the cytoplasm is abundant the nucleus is apt to be larger, oval or slightly irregular, and vesicular (Fig. 3, c). The larger nuclei contain a distinct rounded chromatin mass, besides scattered fine granules. Some nuclei are elongated or even spindle-shaped; where they have a narrow cytoplasmic zone around them they resemble the cells of dense connective tissue. A few of the larger cells possess two or three nuclei. Sometimes the smaller cells are closely packed in a rich network of fibers. At other times the large cuboidal or irregular cells lie close together, separated only by an occasional fiber (Fig. 3, c). In some places the picture is one of closely packed polygonal or elongated epithelial-like cells, with very few intervening fibers.

A number of the cells possess protoplasmic processes, but these are not very prominent. The fibers may be widely separated from the cytoplasm of a cell, and their closest relation appears to be one of contact, rather than of continuity. The cells have no cell membrane, and, whether round, oval, cuboidal, or irregular, their cytoplasm is rarely sharply demarcated, but gradually fades out at the periphery.

What is of particular interest is the presence in very many of the cells in the areas of neuroglia tissue of small dots, staining in the same manner as the neuroglia fibers. Often there is but one (Fig. 2). Sometimes there are two lying close together. Very frequently there are five to fifteen scattered in the cell or grouped together. They may have any position in the cell; sometimes they lie close to the nucleus, sometimes remote. Many times they are surrounded by a halo staining more palely than the general cytoplasm. Very rarely short rods, instead of dots, occur. These same

Fig. 7.—Ependymal epithelium lining a large space. Neuroglia tissue, with many rather coarse fibers perpendicular to ependymal layer and extending a short distance between the ependymal cells. From a preparation not stained by a method suitable for the demonstration of ependymal dots.

dots occur also in the epithelium of the cysts of the first tumor. Here they occur in the inner border or between the nucleus and inner border of the cells (Fig. 5). They can be best seen when the section cuts the cyst so that a view of the top of the cell is obtained (Fig. 6). The cysts which these cells line vary in size. They may be

Fig. 8.—A simple rosette.

minute, representing a small space or lumen in a group of cells, or they may be large. The cysts may have neuroglia in close proximity, or none be adjacent. In some cysts neuroglia fibers penetrate between the lining cells (Fig. 7). Of these cells some are low and cuboidal and others high and cylindrical. Not infrequently in cili-

ated cells rows of these dots are situated at the base of the cilia. In others they are not present.

In tumor 1 are peculiar structures which deserve attention from their vague resemblance to retina and from their containing fibers which stain like neuroglia fibers. These partially fill some of the cysts. In their simpler form they consist of a rounded mass with a pedicle but little smaller than the mass (Fig. 8). The outer portion of this mass is made up of closely packed round or oval nuclei, sometimes deeply staining, sometimes vesicular with one to three rounded chromatin masses. The cytoplasmic bands of these cells are ill-defined, and be-

Fig. 9.—A more complicated rosette.

tween some of them fibers staining like neuroglia fibers can be traced. As the central and basal portions are approached there are fewer nuclei and more fibers. At the base there are almost no nuclei and many coarse fibers (Fig. 4). Most of these coarse fibers are parallel in direction and end against connective tissue by a fairly definite expanded foot. The connective tissue in this portion is frequently in the form of a hyaline band (Fig. 4), sometimes gently undulating, sometimes quite convoluted. Instead of this band there sometimes is a mass of indefinitely fibrillar or ill-defined hyaline connective tissue. In the region of the base there is always a layer of high cylindrical epithelium which passes by gradual transition into the epithelium lining the cyst. The ingrowth and fusion of several such masses produce more complicated structures (Fig. 9). The cysts in which they occur are almost always partially or completely lined by epithelial cells, which are filled with fairly coarse granules of brown pigment. This pigment resembles that found in the retina. The structures themselves resemble in many places the rosettes of gliomata retinæ, and, for need of a better word, may be called rosettes. They have similar small, round nuclei. The coarse neuroglia fibers ending in apposition to a connective tissue band suggest the fibers of Müller. Their occurrence in cysts lined with pigmented epithelium adds further to the analogy.

The mode of development of the structures described above can apparently be traced. At first there is a proliferation of the epithelium at one point in a cyst, resulting in a thickened layer of cylindrical cells, between which fibers staining like neuroglia appear (Fig. 10). The fibers and cells increase in number, and at the same time the connective tissue proliferates and pushes the mass into the cyst cavity (Figs. 11 and 12). The fibers grow mainly toward the base, while the cellular portion remains toward the center. In some cysts several such ingrowths are found (Fig. 13), and it is probable that in this way the more complicated masses are formed. Many variations in complexity are seen, and forms representing different stages of development appear in the various sections.

Discussion.—Nowhere in the central nervous system do we have such an intimate intermingling of neuroglia and connective tissue as in these teratoid tumors. In the brain and cord the separation between pia and cortex is usually sharp. Gliomata, as a rule, are in juxtaposition to surrounding white or gray matter or to pia, and so do not lie in very intimate contact with mesoblastic tissues. The nearest approach to these conditions is where vascular radicles, accompanied by a small amount of connective tissue, penetrate nerve tissue from the pia, and where the connective tissue of the choroid plexus abuts on neuroglia. In case of the teratoid tumors this mingling of the two tissues often occurs at points where no vascular radicles penetrate, but seems due rather to a coincident growth of adjacent foci of two tissues of different germ layer origin, with an overlapping, due to irregularity in rate of development. Such an explanation seems more plausible than that we have the one tissue invading preformed tissue of the other kind in the way a malignant tumor invades adjacent structures.

Moreover, there are present fibers in connective tissue remote from definite neuroglia masses. These stain in a manner identical with the neuroglia fibers of the larger masses, and in size, absence of branching, and undulating course present no differences from many fibers seen in them and in gliosis and gliomata. Their isolated presence in connective tissue seems difficult of explanation. At first it was assumed from their staining properties that they were to be considered of undoubted neuroglia origin. It was thought that their presence in connective tissue might be explained by their arising as an offshoot from a neuroglia mass, with which they were originally connected, and from which later in the growth of the connective tissue they had become separated. Another possible explanation is that early in the development of the tumor a small group of neu-

roglia cells became separated in the midst of connective tissue elements, formed their specific intercellular substance and then disappeared. Either theory would explain their present position, assuming that they are true neuroglia fibers, that is, fibers formed by neuroglia cells. Of this we have no proof, except the morphology

Fig. 10—Early stage in formation of so-called rosette—a local thickening of epithelium of a cyst with formation of fibers between cells.

of the cell, the relation of the fiber to the cell and the staining reaction of the fiber. The former, in many cases, is by no means definite, and in this connection no cell resembling neuroglia cells are present. Doubt as to the latter arose from the following: In some of the teratoid tumors, in which no neuroglia occurs, there

Fig. 11.—Beginning of pushing forward of epithelium by connective tissue formation at base.

are present about sweat ducts fibers staining in the same way as neuroglia fibers, with both the phosphotungstic acid hematoxylin and modified fibrin methods (Fig. 14). While these studies were in progress, Dr. Mallory, investigating connective tissue and smooth muscle, found fine fibers which stain red by the acid fuchsin potassium permanganate method, in sharp contrast to very abundant unstained fibers. This method also stains sharply true neuroglia fibers, and suggests a possible further resemblance in staining reaction between neuroglia and certain connective tissue fibrils.

To test this analogy three specimens of carcinoma of the breast, in whose stroma Dr. Mallory had found the red staining fibrils very abundant, were fixed in either formaldehyd or alcohol. To these were applied the phosphotungstic acid hematoxylin, modified fibrin, Benda's and Huber's methods of staining neuroglia. With all of these fibrils were found, which, from their holding the stain and, to a certain degree, their relation to cells, might be confused with neuroglia. From this it is evident that there are connective tissue fibers which do not readily decolorize after these staining methods and whose identification can not be based solely on staining reaction, since they at times stain in a manner similar to neuroglia fibers.

From this evidence it appears that the fibers scattered in the connective tissue of the teratoid tumor staining

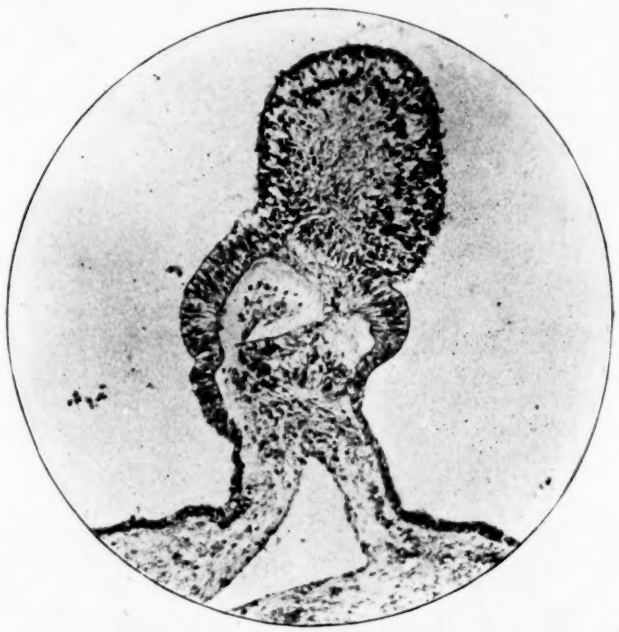

Fig. 12.—More definite pedicle of connective tissue capped by mass composed of cells and fibers.

in the same way as neuroglia are not of necessity of neuroglia origin. Their true nature at present is indeterminate. In some places they are probably neuroglia, in others not.

Dots, staining in the same way as the neuroglia fibers, have been described as occurring in many of the cells of these tumors. The question as to their significance naturally arises. Similar dots or short rods have previously been described by Weigert in the normal ependyma,[8] by Storch in cells lining small spaces of a glioma,[9] by Benda,[10] by Mallory,[11] and by Lewy,[12] in the neuroglia cells of gliomata and by myself[3] in a teratoma (tu-

8. Weigert: Bemerkungen über das Neurogliagerüst des menschlichen Centralnervensystems, Anat. Anzeiger, 1890, v, 543.

9. Storch: Ueber die path. anatomischen Vorgänge am Stützgerüst des Centralnervensystems, Virchow's Arch. f. Path. Anat., etc., 1899, clvii, 127 and 197.

10. Benda: Path.-anatomische Bemerkungen zu dem zweiten vorstehenden Fall A. Fraenkel's, Deutsch. Med. Woch., 1898, 476.

11. Mallory: Three Gliomata of Ependymal Origin; Two in the Fourth Ventricle, One Subcutaneous Over the Coccyx, Jour. of Med. Research, 1902, viii, 1.

12. Lewy: Ueber Centralkörperchen in Gliomen, Virchow's Arch. f. Path. Anat., etc., 1903, clxxi, 236.

mor 1 of this report), both in the cells lining cysts and those scattered among neuroglia fibers. Various meanings have been attached to them. Weigert in his first paper regarded them as an interrupted cuticular layer. Mallory considered the dots as possible evidence of the ependymal origin of the gliomata studied by him. I,

Fig. 13.—Several ingrowths into a cyst.

concurring in this view, attached a similar import to their presence in a teratoma. Lewy looked on them as centrosomes, but regarded the presence of groups of them in neuroglia cells as an inheritance from ancestral ependymal cells, and the ring or rosette arrangement of some as a probable rudimentary cilia formation. In considering the different views, certain facts have been brought out which do not readily harmonize with them, though at the same time it has not been possible to determine definitely the nature and significance of these

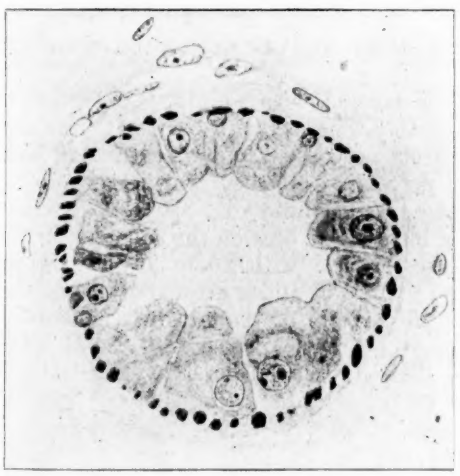

Fig. 14.—Sweat duct in teratoid tumor, showing cross section of coarse longitudinal fibers lying between true basement membrane and epithelial cells. These stain with neuroglia stains.

dots, and the attempt to advance any new hypothesis regarding them will not be made.

The earlier view of Weigert that they are a cuticular arrangement no longer seems tenable since the dots are found irregularly scattered through the cytoplasm of cells lying in the midst of large areas of neuroglia fibers and lining no space or lumen.

Are they centrosomes? They can be stained by methods used for demonstrating centrosomes as the iron hematoxylin method. Multiplicity of centrosomes has been described by Heidenhain in bone marrow giant cells. We have studied these dots in the ependyma of a series of pig fetuses from 18 mm. to 17½ cm. in length, and in several early human fetuses, using the phosphotungstic acid hematoxylin staining method. Here they are almost always present as a row or group adjacent to the spinal canal or ventricle. At this time nuclei are situated generally at some distance from the central space and its bordering dots, and dots are not found except in this arrangement. Mitoses of the cells in this region are common, and the dividing nuclei often approach near the space at whose border the dots are grouped. Yet there is no apparent change in the dots, nor are any dots seen associated with the mitoses. This does not seem to favor the view that the dots are centrosomes.

That they bear no close relation to the formation of neuroglia fibers, whose staining reactions they have, is shown by their presence in the fetuses studied at a time much before the fibers show any evidence of their presence.

The dots are already present in an 18 mm. pig, when, according to Hardesty,[13] differentially staining neuroglia fibers appear first in pigs from 16 cm. to 21 cm. in length.

The dots do not appear to be closely associated with cilia, since they were absent in some ciliated cells, and occurred in some non-ciliated cells. They are not always present in cells which originate from ciliated cells, as they could not be demonstrated in an adenocarcinoma of the uterus.

Can the presence of these dots be considered evidence of the ependymal character and ancestry of a cell? Dots were not found in most parts of these tumors except in neuroglia cells or cells lining cysts, and presumably of ependymal character. They were not found in several carcinomata of the breast or in a malignant adenoma of the large intestine. Dots very similar were found in the high cylindrical epithelium of that part of one tumor described as resembling a papillary adenocystoma of the ovary. Dots similar, but slightly larger, were found in some sweat ducts in these teratoid tumors and in those of a specimen of normal skin. Larger granules staining similarly with Mallory's phosphotungstic acid hematoxylin were found in the pancreas, but dots were not present in the kidney of this case, nor were they found in the fetal organs of the 18 mm. pig. This shows that dots, if not identical with those occurring in true ependyma, yet staining similarly, occur in cells undoubtedly of different nature, and so the mere presence of such dots in a cell or group of cells can not be considered diagnostic of the ependymal character and origin of these cells. When they do occur in cells which offer other evidence of a central nervous system origin, it seems justifiable to regard their presence as adding evidence in favor of the view that the cells containing them bear a genetic relation to ependyma. This is true for cells which line cysts and are in close relation to neuroglia tissue and for cells which are embedded in neuroglia fibers. Where the cells line cysts and bear no close relation to neuroglia, such a conclusion does not seem justified, and their nature remains undetermined.

13. Hardesty: The Neuroglia of the Spinal Cord of the Elephant with Some Preliminary Observations on the Development of Neuroglia Fibers, Am. Jour. of Anat., 1902, ii, 81.

CONCLUSIONS.

From the preceding work the following conclusions may apparently be drawn:

1. Neuroglia is a common constituent of teratoid tumors.
2. Its structure in them is very varied, simulating many known forms.
3. Neuroglia is more intimately associated with mesoblastic tissues in teratoid tumors than elsewhere.
4. In such tumors occur isolated fibers and groups of fibers which stain like neuroglia, but whose nature can not be determined by the staining reactions of Mallory. Huber and Benda, since these methods may stain other fibers than neuroglia fibers.
5. In many cells of these tumors occur small dots or groups of dots which have similar staining reactions to neuroglia fibers.
6. The presence of these dots in cells, though not absolutely diagnostic, may be considered as evidence in favor of the ependymal origin of the cells in which they occur.

Finally, it is with great pleasure that I acknowledge the very many valuable suggestions made by Dr. F. B. Mallory and his interest in this study. To Dr. J. A. Sampson of the gynecologic department of the Johns Hopkins University I am indebted for a number of these tumors, and to Dr. W. H. Lewis of the anatomic department of the same institution for the series of fetal pigs.

DISCUSSION.

DR. L. HEKTOEN, Chicago—Are the rosette bodies which you have described to be regarded as imperfectly developed eyes?

DR. H. A. CHRISTIAN, Boston—The analogy of these structures to eyes was considered and there is a great deal in favor of this view. The occurrence in many of these cysts of pigmented epithelium, the fibers which suggest Müller's fibers, and the small round nuclei which are very common in imperfectly formed retinæ, are all in favor of that theory; but there is no proof of what they are, and this is a mere opinion. However, I regard them as possibly an attempt to form eyes.

HEMOGLOBINURIC FEVER.

ITS CAUSES AND TREATMENT, WITH ESPECIAL REFERENCE TO THE USE OF QUINIA.*

WALTER SHROPSHIRE, M.D.
YOAKUM, TEXAS.

In presenting this subject for your consideration, we do so because of the diversity of opinion concerning it, hence evident need for more thorough study and discussion. Our consideration must leave out many of the features and characteristics of that arch mimic of all diseases, malaria, and be confined to that disease characterized by hemoglobin in the urine and due to malaria in some of her protean manifestations, discarding for the time Yersin's supposed discovery of a specific cause other than the malarial plasmodium, and all other theories and suppositions born of efforts to account for this peculiar manifestation.

In making an effort to clear up some of the uncertainty enveloping the subject, and to arrive at the truth concerning this disease, it was determined to depend, not alone on the individual conclusions of those who saw the disease, influenced no doubt by former teachings and impressions, but to get as thorough report of cases as possible, and view them, their cause, treatment and results, singly and collectively, drawing conclusions from recorded facts, and not by one individual or from one point of view, but by men of many localities, teachings and impressions.

Accordingly 2000 blanks for report of cases were printed, which provided for a thorough report of all features that we are to consider here, together with some others that are desired for future consideration, and with a letter requesting a report of cases were mailed to the physicians of southern and eastern Texas and Louisiana, selecting localities where it was presumed the disease most prevailed. Of those requested, 81 replied; 40 of whom could not report cases, while 41 reported 173 cases, to which I added 29 cases of my own, making a total of 202 cases reported by 42 observers. Many of those reporting had treated many times the number of cases reported, but owing to the lamentable fact that no case book was kept, they were unable to make even a partial report on others.

Of those cases reported many features of the disease were unreported on, owing to the fact that in most instances the patient was in the rural districts, so far from the attendant's office that frequent and proper observations could not be made; and when the patient was seen many of the accoutrements necessary for proper observation were not at hand. Therefore, in tabulating and reporting on the different features observed, it will not be of the whole 202 cases, but of that number on which these features were reported.

Of the 202 cases collected there were 61 cases treated without methylene blue or with less quinia than 15 grs. per diem, which is practically no quinia, of which 26.2 per cent. died and 73.8 per cent. recovered; while 112 were treated with 20 grs. or over of quinia, of which 16.9 per cent. died and 85.1 per cent. recovered; 4 were treated with methylene blue, with 1 death and 3 recoveries.

Of the cases treated without methylene blue or quinia 30 per cent. had hemorrhage from other organs than the kidneys, occurring on the second, third and fourth days, evidencing a non-subdued condition of the malaria and its recurrence, involving other organs; of these 50 per cent. died, two during the chill following the hemoglobinuric attack, and one during the second chill thereafter.

Of those treated with quinia, 9.8 per cent. were so affected, with 3.6 per cent. fatality. It thus appears that quinia effects not only a lower death rate, but also lessens the percentage of recurrent paroxysms. In those cases treated with quinia your attention is invited to the following facts which bear on the adequacy of the dosage: Of 50 cases treated with 20 to 30 grs. per os, 22 per cent. died; while of those given 30 grs. or over in the stomach, 16 per cent of the 43 died; and of those given 40 grs. or over only 8.6 per cent. of the 35 died. Of the 19 cases treated with quinia hypodermically, only one case or 5.26 per cent. died, and that one within 48 hours of the onset, of toxemia, due to the paroxysm had before treatment was begun. There were 12 cases reported where the urine became darker upon the administration of quinia and three where it became darker when quinia was withdrawn. Of the total of the non-quininized patients, 9.8 per cent. died of uremia, while of the 19 deaths among quinia patients, 8.9 per cent succumbed to uremia. While uremia occurred in 16 per cent. of those treated with less than 30 grs. by the stomach, it occurred in only 2.8 per cent. of those treated with 40 grs. or over by the stomach, and not at all in those treated with quinia hypodermically. The average illness of those treated without quinia was 9.66 days and of those

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. J. M. Anders, Frank A. Jones and W. S. Thayer.

treated with quinia, 5 days. Of the men reporting on the point, 29.41 per cent. believe quinia may and does produce hemoglobinuria, while 70.59 per cent. believe that it does not. The largest dose of quinia that seemed to produce hemoglobinuria was 40 grs., while the largest which did not produce it was 100 grs. The average largest dose that seemed to produce hemoglobinuria was 13 grs., while the average largest dose that did not produce it was 52.6 grs. The smallest dose that seemed to produce hemoglobinuria was 4 grs. and the average 6.4 grs., while about 15 per cent. of cases occurred when no quinia had been given for 24 hours or over. The total average dose that eeemed to produce hemoglobinuria was 9.7 grs. per day.

In each case here estimated, the subject had been living in a violently malarious locality three months or longer, and most of them for years. In all save one there was history of malarial paroxysms immediately preceding the pernicious or black water form, and in all a previous malarial development. The number of men reporting blood examinations was 4. Number of cases, 12; parasites found in 5 cases, not found in 7.

The following conclusions are justified:

1. This disease always occurs in persons suffering repeated attacks of malaria (this was so in every case reported).

2. It nearly always follows one or more mild paroxysms of malaria at the proper time for its next exacerbation (there was but one exception to this reported).

3. It has all the characteristics of malaria, chill, fever and sweat.

4. Where adequate examination of blood is made, the hematozoa of malaria are found (it was so in 41 per cent.).

5. Its habitat, that of most violently malarious districts (all cases reported were so) are sufficient to establish malaria as a causative agent, if not the only one.

To the present there is no claim for a cause other than malaria worth more than a passing notice, except the one which is maintained by about 30 per cent. of those reporting, namely, that quinia produces it, to which claim we invite your careful and scrutinizing attention.

To establish the cause of any disease we must apply the agent to the subject and have, as uniform result, the disease. But if there are two agents suspected as causative which applied together produce the disease, but applied separately to the same individual the one produces it, the other never, we can attribute only to the one a causative place and to the other an accidental presence.

Such is the case before us. Malaria, taken as a cause and applied without quinia to an individual of such tendency, hemoglobinuria results in 15 per cent. of the cases before us. Quinia had been applied to probably all of the cases before us without the presence of malaria and no hemoglobin appeared in the urine. Then in 85 per cent. of them malaria and quinia were both applied to the individuals, hemoglobinuria resulting. Which produces it?

Physiologically quinia acts on the blood, nerves and small vessels. On the blood it inhibits the oxygen-carrying power without causing separation of the hemoglobin from the corpuscle. On the nerves it is, first, a stimulant, then as the dose increases a depressant till it suspends the function of some of them entirely, as the optic and auditory, and in lethal doses, those governing the heart.

On the blood vessels it acts as a vasoconstrictor, increasing blood pressure and toning up those areas where from malarial toxemia there is a stasis, as in the brain in some forms, and the gastro-intestinal tract in others, and in the case before us, in the kidneys. And, like all such remedies, when increased sufficiently it ceases to act as a stimulant to the vasoconstrictor muscles and acts as a paralyzant of them, hence a dilator of the vessels, this occurring just as the lethal dose is reached, which, added to the suspending of the function of the vagus, causes such lowered blood pressure that death soon ensues.

Reviewing these effects of quinia it is indeed difficult, if not impossible, to conclude logically that it can produce hemoglobinuria. To consider it from an experimental standpoint, we observe that the deaths produced by quinia have been due to its effects on the nervous and circulatory systems, with never an occurrence of hemoglobinuria. If quinia is capable of producing this condition at all, it looks strange that lethal doses have never produced it, while those who believe it capable of doing so attribute the production to an average daily dose of 9.7 grs. Thirty of the cases before us had the disease without the exhibition of quinia and of those who were taking quinia when the hemoglobinuria developed, in 89 of the 108 under increased dosage it disappeared. Indeed, it appears to me that one must be a fit subject for homeopathy to conclude that quinia, having produced the disease in 108 cases, would cure it in increased dosage in 89 of them. Again, in those where quinin might be supposed to produce the disease it were untenable logic to maintain that removing the cause would result in an increased death rate, while increasing the cause would diminish it, as 26.2 per cent. is to 16.9 per cent.

Of those reporting, the maximum dose of quinia given without producing hemoglobinuria, the largest dose was 100 grs., and the average 52.6 grs., and of those reporting the largest and the smallest dose that seemed to cause hemoglobinuria, the largest dose was 40 grs. and the smallest 4 grs., or an average of 9.7 grs. per day. Now, in the face of reason, can we maintain that 9.7 grs. of quinia will produce the condition when 52.6 grs. fail to produce it?

Those cases where quinia has seemed to produce hemoglobinuria have invariably been in persons known to be malarially infected, where the disease seemed mild and quinia was administered to eradicate it. Carefully considering these cases, we will note that of 1000 cases so treated probably in 950 cases the disease disappears, one develops the hemoglobinuric form, one the comatose form, three the enteric form, while 45 will return still in the mild form. There is unquestionably as great a percentage that develops the comatose form, due to peculiar determination of the disease to the brain, and three times as great a per cent. that develops the enteric form, due to the determination of the disease to the intestinal tract, as there is of the hemoglobinuric form. Now, if the quinia produced the hemoglobinuric type, did it not also produce the comatose and enteric forms? And how about the 45 returns of the mild form? Did quinia produce them also? Is it not as rational to attribute the one to quinia as the other? Or is it not a fact that in all of the cases which recurred, the remedy had failed to effect the cure and the disease continued, in some assuming a more pernicious form, in others continuing the mild type? It appears that such is the case and that its assuming certain forms as it grows severer or its selections of certain organs on which to exercise its severest toxic effect, is one of individuality or peculiarity of the subject and not of the remedy. If quinia is to be eschewed in treating the one form, hemoglobi-

nuric, should it not be shunned in the others, comatose and enteric? Yet I dare say that no man in this assembly would have the temerity to withhold quinia, the only specific, in the comatose or other pernicious forms of malaria.

Another strong evidence that it is the individual peculiarity that determines the hemoglobinuric form, is the fact that this form recurs again and again in the same individual and is prone to run in families, while seldom indeed an individual who has suffered an attack of hemoglobinuria develops a pernicious malarial attack other than the hemoglobinuric form. Why is it thus, if not due to the individual peculiarity?

Another error in the conclusion that quinia produces hemoglobinuria is the fact that in the vast majority of those cases quinia is withheld during the greatest pyrexia of the preceding attack, or to wait the action of calomel, and is administered too late to prevent the pending paroxysm; this growing more severe assumes the hemoglobinuric form, or, if it has already become hemoglobinuric, the urine that has partially cleared during the interval becomes darker, which is attributed to quinia. In this connection permit me to say that in every case seen where quinia had been administered and might be supposed to play a part in producing hemoglobinuria, the paroxysm occurred at the regular time for the exacerbation of fever and with chill and rise of temperature, just as occurs when the disease is left to malaria alone; and in those cases reported by others, even where black water occurred as often as three times, the increased color of the urine marked well the time for recurrence of malarial paroxysm in approximately 20 per cent. occurring on alternate days, 75 per cent. on successive days and 5 per cent. twice daily, just as we find malaria acting in other forms than this.

Bearing in mind the established fact that the malarial parasite is most easily killed by quinia in its younger existence, it is easy to understand that withholding the drug through the stage of high fever or till the effect of calomel is had, will permit the growth of the plasmodium to such a size as to be decidedly more resistant to quinia, and to allow it to go on to sporulation, thus producing another paroxysm which may be pernicious, even hemoglobinuric, and still there be enough quinia in the blood to kill the young parasite as it is set free in the plasma, thus explaining some of the spontaneous cures without further administration of the drug.

Another error in quinin therapy of this disease, to which your especial attention is invited, is inadequate dosing. The estivoautumnal parasite, the one most commonly producing this disease, is far more resistant to quinia than other forms, and it, like all forms of animal life, becomes habituated to any poison till it can withstand even ten times the dose necessary to kill when not so habituated. In all violently malarious districts, such as this disease prevails in, and especially in every chronic malarial subject, there is, without exception, in this country, a partial saturation of quinia for a considerable time, if not by quinia prescribed as such, then by quinia in the form of the numerous patent chill tonics, which have for their base quinia; hence the malarial plasmodium in this disease has, to some extent, become a quinin habitué, and only vastly increased doses prove toxic. Personally this has been observed many times; in one instance, 25 grs., given hypodermically to a year old child suffering from the enteric form, although administered 8 to 20 hours prior to the pending paroxysm, failed to prevent it and the little fellow died during the chill. You will observe that only 8.6 per cent. died where the dose was 40 grs. and over, while 22 per cent. died with 30 grs. or less.

Your attention is called to another point of error in quinin therapy in other forms of malaria as well as this, and it is by far the most important point of all—that of failing to get the drug into the blood. It is adequately proven and generally conceded that the malarial parasite destroys its host, the red blood cell, on sporulation, thereby setting free into the plasma what hemoglobin it has not consumed, there to remain until the liver has converted it into bilirubin. This, frequently repeated and in excessive quantities in the pernicious types, overwhelms the liver with work till its function is almost, if not quite, suspended, and a stagnant portal circulation results, hence the *vis-a-fronte* causes a passive congestion of the stomach mucous membrane and a cessation of its functions, both secretory as to hydrochloric acid and absorptive. The first of these conditions evidenced by alkaline vomitus, would prevent the solution and absorption of quinia put in the stomach in other than an acid solution, were we able to keep it there, while the abolition of the absorptive function would prevent the taking of quinia into the blood were we able to maintain an acid solution on the stomach; or more accurately speaking, the blocked portal circulation would prevent its entrance to the general circulation and its application to the parasite. So quinin dosage by the stomach is in many instances but a method of deceiving ourselves in the belief that we have applied this specific in a case where it is needed, while in fact the drug has never reached the blood where the parasite lives.

Just here your attention is called to the fact that all the cases where quinia was thought to be the cause of hemoglobinuria have been cases where it was given by the stomach and by men who depend on the stomach administration, while not a case receiving hypodermic administration developed the disease and none of the men who depend on the hypodermic method attribute the disease to quinia; the death rate under the hypodermic method being 5.2 per cent., while that under stomach administration is 20 per cent. This, taken in connection with doubtful ability to saturate the blood through the stomach in pernicious forms, seems quite significant.

It is claimed that hemoglobinuria is the manifestation of an idiosyncrasy for quinia. Yet no case of unquestioned freedom from malaria has been observed to develop hemoglobinuria from quinin administration, and in every case observed and reported the patient had taken quinia for other troubles and mild forms of malaria without the development of hemoglobinuria. If quinia produces it in severely malarial subjects, why not in mild and non-malarial ones?

Those cases attributed to quinia are not experimentally produced or based on physiologic or pathologic facts, but on purely paracelsian empiricism. Are we justified in adopting this method of reckoning against such preponderating evidence to the contrary in this age of enlightened and logical therapy?

The commonly accepted symptoms of cinchonism may and do cause us to err in our efforts to cinchonize our patients by the stomach, for of tinnitus aurium, nausea, relaxed and moist skin, dilated pupils, generally accepted as indicating quinia in the blood, the two former are most depended on and least reliable. In fact, I do not believe them due to quinia in the blood at all, but to the application of quinia to the end organs of the

nerves in the stomach mucous membrane. They are like the urticaria due to gastric irritation, a manifestation of the irritation of those nerves by quinia. Not infrequently violent complaint of those symptoms has been made during the stomach administration of quinia and by changing to the hypodermic method, even with an increased dose, the complaint has ceased. You will pardon a brief report of a case in this connection which illustrates the fact. Mrs. C., a malarial cachectic of repeated recurrent attacks during the last 12 months, was suffering quotidian malarial paroxysm. Quinia sul. was prescribed morning and night in gram doses after Koch's method. The paroxysm occurred next day at the usual hour. Quinia was increased to three grams daily; the next morning the paroxysm was on time and hemoglobinuric. She was complaining vehemently of cinchonism and insisted that no more quinin be given, as it was doing no good, and making her sick. Now, one who in the least feared quinia as a cause of hemoglobinuria would have discontinued it when the disease assumed the hemoglobinuric form under 45 gr. doses, but the method of administration was changed to hypodermic and 20 grs. given every 4 hours, or 100 grs. per day, and the symptoms of cinchonism largely disappeared, the urine cleared, and the patient made rapid recovery.

In this case, as in several others equally as emphatic, the symptoms of cinchonism complained of disappeared under the increased dosage when the drug was removed from the mucous membrane of the stomach, and what some would have considered hemoglobinuria produced by quinia, disappeared under vastly increased doses when it was put directly into the blood. The only rational conclusions to be drawn from such cases are, first, the quinin applied to the gastric mucosa produced the symptoms called cinchonism and that its removal permitted the symptoms to subside; second, that the quinia had never been absorbed and carried into the blood, and therefore had not killed the parasite, whose ravages continued till quinia was so applied and terminated their career.

Summing up the evidence for and against quinia as a cause for this disease, we have:

Of the physicians reporting, 29.4 per cent. affirm it.	Of the physicians reporting, 70.59 per cent. deny it.
When quinia is suspended in treatment, 73.8 per cent. recovered.	When quinia is administered 83.1 per cent. recovered.
Distinct recurrences of attacks after the first appearance of black water in non-quininized patients, 9.8 per cent.	Distinct recurrences of attacks after the first appearance of black water in quininized patients, 4.4 per cent.
Per cent. of cases occurring from quinin alone, no per cent.	Per cent. of cases occurring from malaria without quinin, 15 per cent.
Per cent. of cases where quinin was thought to aggravate, 5.9 per cent.	Per cent. of cases where quinin was thought not to aggravate, 55.4 per cent.

With such preponderating evidence against quinia as a causative agent, that portion of the subject is left with you.

TREATMENT.

In taking up the treatment of this disease I shall be as brief as possible, giving the greater time, first, to those methods on which we differ; second, to those thought most important; third, those not in common use—dwelling but little on those measures of common acceptance and usage among us.

The inter-relation of cause and treatment, or the dependency of the one on the other, has caused in considering the first the foreshadowing of the most important feature of this portion of our subject. If the disease is due in part or whole to malaria, the treatment should be to remove the cause by administering quinia, the specific, in a manner sure to reach the parasite in the blood, and in sufficient dose to kill with certainty.

In dangerous diseases like this we should never reverse the order of the old Latin maxim, *"curare, cito et jucunde." "Curare"* should stand first; and in selecting methods of administration the one surest to carry the remedy to the parts desired should without exception be our choice, so long as imminent danger to life is not incurred—hence, intravenous or hypodermic administration should be resorted to in medicating a patient suffering from this trouble.

In dosage of quinia one should steer well on the side of the drug, remembering that the parasite is of that type most resistant to quinia, and as a rule has become to some extent habituated to the drug. Bearing these facts in mind and taking for our base the dose that ordinarily proves efficient in other forms of malaria, an average of 30 grs. daily, we would take for an average dose in this condition, 40 grs. intravenously or hypodermically per day, until the next period for an exacerbation is safely passed, and continue it in half that dose until the second expected exacerbation is safely passed, when it should be discontinued for three or four days, and repeated in 20 to 30 grain doses every four to six days till five or six weeks are passed without a paroxysm. In the primary administration of the remedy one should remember that the older the parasite the greater its resistant power to quinia; therefore the sooner it is administered after the parasite has sporulated (the onset of the paroxysm) the easier it is killed and the surer is one to prevent the next paroxysm, which in pernicious malaria frequently means death to the patient.

Since Ivanoff,[1] by a careful study of the effects of quinia and methylene blue on the malarial parasite, has proven that quinia has its greatest affinity or toxic effect for the chromatin or nucleus of the plasmodium, which constitutes nearly the whole of it soon after hatching, and loses it as the achromatic zone accumulates around the nucleus as the parasite grows older and larger (a fact well proven clinically long since); and that methylene blue has greatest affinity for the achromatic zone (nicely portrayed by Romanovsky's method of staining), it behooves us to remember methylene blue in cases where we are called so late that quinia alone might fail to prevent the pending paroxysm, and to combine then the methylene blue in 3 to 6 grs. doses, two or three times daily. Another characteristic of methylene blue that recommends it in these cases is its sedative effect on the nervous system as portrayed by Hughes and Lovelace,[2] where of 22 cases of acute mania treated with it 16 received natural refreshing sleep. Of four cases of this disease reported treated by methylene blue there were three cases, or 75 per cent. recovered. Of the 19 cases reported treated with quinia hypodermically only one death is reported, and that occurred within 48 hours, showing that it was the result of the paroxysm had prior to any treatment, and not after quinia or any other remedy might have prevented it.

The tardiness of the effect of arsenic as an antiperiodic practically puts it out of consideration in conditions so pernicious, and its tendency to irritation of the renal epithelium also contraindicates it. There is no other drug whose mention in this connection is worthy of our time.

Considering other conditions for treatment, the inactivity of the liver stands first and a cholagogue is certainly indicated, for the presence of free hemoglobin in

1. Deutsche Med. Wochenschrift, May 2, 1901.
2. Phila. Med. Jour., March 22, 1902.

the plasma would alone, if undisturbed, soon prove fatal, to say nothing of the stagnant portal circulation obstructing nutrition and medication intended to alleviate other conditions. Calomel is certainly one of the best, if not the best, cholagogue and its inoffensiveness to the mucous membrane of the stomach commends it highly in this trouble where nausea is a predominating feature, hence calomel in small doses, often repeated (¼ gr. every half hour) is a favorite and justly so, and I would add 1-20 gr. of hyd. bichlorid hypodermically every five hours till the liver is well aroused, with massage of the liver or mustard plasters over it to the point of thorough redness of the skin. Of the 200 cases reported all save one were treated with calomel as a cholagogue and I note that the greater one's experience with this disease the more urgent is his advocacy of calomel.

Certainly to unload all effete material from the bowels and stimulate their eliminative function would add to

Daily dose of quinia; how administered	20–30 gr. Stomach				30–40 gr. Stomach				40 gr. and up. Stomach				20–30 gr. Hypod'r-mically.				30–40 gr. Hypod'r-mically.				40 gr. and up. Hypod'r-mically.				15 gr. or less, or no quinin.				15–20 gr. Uncer-tain.				Methy-lene blue.			
Manner, cause and time of death	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.	Uremia within 48 hours.	Toxemia within 48 hours.	Uremia after 48 hours.	Asthenia after 48 hours.
Deaths with hemorrhage from kidneys alone	.	1	7	2	.	.	1	1	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	3	1	1	2	.	1	1	3	.	.	1	.
Deaths with hemorrhage from other organs and kidneys	.	.	1	.	.	1	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	1	3	3	2	.	1	3	1	.	.	.	.
Recoveries with hemorrhage from kidneys only	37				4				30				8				4				3				36				9				3			
Recoveries with hemorrhage from other organs and kidneys	2				.	.	.	.	2				.	.	.	.	.	.	.	.	3				9				.	.	.	.	.	.	.	.
Total number of cases treated	50				8				35				8				5				6				61				19				4			
Number and per cent. of recoveries	39 cases or 78%				4 cases or 50%				32 cases or 91.4%				8 cases or 100%				4 cases or 80%				6 cases or 100%				45 cases or 73.7%				9 cases or 47.4%				3 cases or 75%			
Number and per cent. of deaths	11 cases or 22%				4 cases or 50%				3 cases or 8.6%				. . . . .				1 case or 20%				. . . . .				16 cases or 26.3%				10 cases or 52.6%				1 case or 25%			
Per cent. of deaths in quinin treatment by stomach and hypodermically	18 cases or 19.3 per cent.												1 case or 5.26 per cent.												. . . . .				. . . . .				. . . . .			
Per cent. of deaths in each treatment	19 cases or 16.9 per cent.																								16 cases or 26.2%				. . . . .				1 case or 25%			
Number and per cent. of cases with hemorrhage from other organs	9.8 per cent.																								29.5				. . . . .				. . . . .			
Average duration of illness	Treatment with quinin—5 days.												Treat't without quinin—9.66 days.																							
Opinions of reporting physicians	70.6 per cent believe quinin does not produce hemoglobinuria.												29.4 per cent. believe quinin does produce hemoglobinuria.																							

the chances of our patient, and enemas of hot solutions of sulphate of magnesium accomplish this quickest and surely, together with stimulating diaphoresis, a valuable means of eliminating much undesirable material from the blood and relieving the irritated kidneys of some tax. To allay the nausea and vomiting, iced champagne has proven most efficient in my hands, with ice cold beer a close second, the former adding stimulation and the latter both stimulation and diuretic effect to its credit. While large drafts of very hot water have often proven very efficacious as a stomach sedative, as well as a diaphoretic and stimulant, one of my advisers strongly urges this as the most important treatment of all. So soon as the stomach is in a condition to appropriate it, nutritious fluid food should be given at regular and proper intervals. For the kidneys, hot fomentations over the loins or perhaps counter-irritants with mild diuretics should be given, every effort being made to save the kidneys any irritation and labor. The intravenous injection of large quantities of normal salt solution serves well to stimulate over the depression, and assists in eliminating poisons from the blood, and in one case reported, where entire suppression of urine had occurred, it started up the renal secretions and the patient recovered when apparently he was doomed. Stimulants and tonics hypodermically in liberal doses should be used to maintain the vital functions, and here strychnia stands first. So soon as the expected paroxysms are safely passed, ferruginous and bitter tonics per os are to be given, steam baths and sweat baths are recommended and have to commend them the greatest relief of the kidneys by their diaphoretic action.

The time and space required to enumerate writers and practitioners who have assisted in these efforts are too great to allow their recital, hence the omission of a bibliography.

DISCUSSION.

DR. WILLIAM KRAUSS, Memphis, Tenn.—One can not study diseases by any rules of logic, but we can discuss that way. The reader of the paper states that, among about 170 cases reported, the blood examination was made in 12, and 7 of these 12 did not show the malarial parasites; if that were so, I should like to know why he cinchonized these 7 patients? About 12 years ago I attempted, by proxy, to study this disease and found in a very short time that it was exceedingly unsatisfactory. Then I attempted to place myself in touch with gentlemen in the vicinity of Memphis, requesting them to wire me when they had such cases and I would take the first train to them. This also proved to be unsatisfactory. I then decided to abide my time until I could get a visiting service in a local hospital where I could study the disease properly from beginning to end. I think it is illogical to attempt to classify the mortality according to the treatment, irrespective of the pathologic conditions; whatever remedy we use should be given to overcome the pathologic conditions or to remove the etiologic factors which may be present in a given case. Judging from the character of the cases reported he evidently saw cases of the intermittent variety, accompanied by chills and fever, and such cases are exceedingly rare during the season of the estivo-autumnal parasites. They are found in the spring and early summer and are very transient. In his cases he found the parasites persisting through the attack. It is proper to cinchonize such cases.

What is the pathologic condition to be found in such cases? It is a steatosis of the kidneys and liver, a rapid breaking down, and, if present, a disappearance of the malarial parasites. The treatment must be directed to that end. What is the pathology of the blood? There is a hemolysis. If you have studied the subject of hemolysis only very superficially you

know that it requires a specific immune body and a complement to produce it. The normal mechanism of this in malarial infection is probably for the destruction of infected red blood cells. There is a later storage of a surplus of this specific body; the complement may be produced either by quinin or a new superadded infection—either, then, may be the occasion of an attack. This is where the question of administration or non-administration of quinin comes in. In the majority of the cases the hemolysis effects the destruction of the parasites. The subsequent temperature may be a guide; as a rule, the present malarial infection may be ignored. The doctor has stated that only small doses of quinin produce the hemoglobinuric fever, and in one case he produced it with 90 grains; if that is a small dose I should like to know what he considers a large dose.

Last summer, during my illness, there were admitted to St. Joseph's Hospital 21 cases of malarial hemoglobinuria, and all were treated with hypodermic injections of quinin; two recovered. On the other hand, I have now an unbroken series of 21 cases without a death. The main point is, avoid cinchonizing these patients. Take such measures as you can to prevent fatty changes taking place.

DR. FRANK A. JONES, Memphis, Tenn.—A few days ago I heard Dr. Osler say: "Tuberculosis is the captain of the men of death." I should like to paraphrase that expression, and say: "Tuberculosis is the captain of death and malaria is his first lieutenant."

We have in our midst to-day a quartet of men who have been working in malaria. One of these is Dr. Krauss, and there is no man in this country who understands malaria better than he. Then we have among us another gentleman whom we all know and greatly respect, and who has written a book on malaria; I refer to our chairmain, Dr. W. S. Thayer. Again, we have another gentleman of brawn who has been brought up in a country district, at a little flag station, but yet who has the best equipped laboratory in Mississippi; I refer to our secretary, Dr. James B. McElroy. One is a wheelhorse; the other an Ajax. Then, too, I ask that Dr. Sutherland of Mississippi, another man who has done much on this subject and a man whom all greatly respect, be asked to address this Section.

DR. H. L. SUTHERLAND, Rosedale, Miss.—This subject has been frequently discussed and the principal feature of discussion always is as to the advisability of the use of quinin. I think there is one proposition on which we all agree, namely, that in the presence of an active estivo-autumnal infection we should use quinin. It seems to be the general opinion that "the existence of the hemoglobinuria itself, or the presence of some other toxic substance in the blood" (Thayer) destroys the parasites and renders the administration of quinin unnecessary and therefore harmful; but, in my observation, this is not always true. The use of the microscope should then govern, in these cases, the use of quinin. But, unfortunately, only a very small percentage of physicians practicing in sections where hemoglobinuria occurs have a practical knowledge of the use of the microscope, and therefore must find some other method of determining the treatment.

After the appearance of hemoglobinuria, my first attention is directed to elimination, and I do not give quinin in the first twenty-four hours; if the fever continues high, I give 15 or 20 grains of quinin or two ounces of Warburg's tincture. If the patient has taken quinin preceding the attack, I am not in a hurry to give more, but rather await the result of what he has taken. I can better illustrate by citing two cases in point: In August, 1901, I saw a case with a temperature of 101, and next day 102, and the third day 104.8, when I gave two ounces of Warburg's tincture, and his temperature dropped to 101. I repeated the dose and his temperature became normal, and on the fifth day of the disease there were a few estivo-autumnal organisms present.

Oct. 25, 1902, my son had a chill and in the next forty-eight hours took 48 grains of quinin. Several hours after the last dose he had a chill with fever, which soon subsided and I gave no more quinin; in thirty hours after the last dose of quinin he had another chill with hemoglobinuria, but his temperature did not go over 102, and in another twenty-four hours his urine had cleared and temperature was normal. I supposed he had had sufficient quinin prior to the hemoglobinuric attack to kill the malarial organisms. A blood examination made by Dr. Krauss of Memphis, October 31, showed "very active estivo-autumnal infection," and I began the administration of quinin again. These two cases prove, to my mind, that in some cases at least quinin should be given, while, perhaps, in a majority of cases, they get along better without it; and I have adopted the rule that where the fever following hemoglobinuria continues high after tewnty-four hours, or from a temperature as low as 101, its tendency is to go higher each succeeding day, I give quinin, and following this rule I find I give it in about half of my cases.

DR. JAMES B. MCELROY, Stovall, Miss.—I agree with the reader of the paper in the statement that hemoglobinuric fever is, in the majority of cases, due to malarial infection. That parasites are not always found in the peripheral circulation is due to several circumstances. Stephens and Christopher think it is due mainly to the fact that quinin has usually been administered previous to the occurrence of black water. This is undoubtedly true, but I have seen at least one case in which parasites were present previous to the attack; no quinin was administered previous to nor during the course of the disease, and the parasites disappeared a few hours after the onset. I have surmised that this is due to the fact that in the extreme hemolysis which takes place the cells of low resistance will naturally be the first to be destroyed, consequently the cells containing parasites are usually first destroyed. The parasites, being set free in the plasma, soon die.

I have observed more than fifty cases of this disease and in 19 cases have made repeated blood examinations. In only 5 of these have parasites been present, estivo-autumnal in 4 and double tertian in 1. The malarial nature of the remaining 14 was demonstrated by the leucocytic variation and pigmentation characteristic of malaria, and by the character of the febrile attack previous to the development of black water.

As to the relation of quinin to hemoglobinuric fever, in a few instances black-water fever develops in the course of a malarial infection in which no quinin has been administered, as in the case just referred to. But in the majority of cases it occurs in the course of an old malarial infection in which quinin has been administered. And my experience is in accord with the findings of the malaria commission to the royal society, which concludes that black-water fever is of malarial origin, but that it is not a malarial attack *per se;* that in the majority of cases quinin is the immediate causative agency. I have never seen a pure quinin hemoglobinuria, though it undoubtedly has occurred.

The few experiments which have been made *in vitro* to determine the hemolytic effect of quinin in these cases have, so far as I know, been negative. Recently I have been making some experiments along this line which, though limited, indicate that quinin has a hemolytic action on the blood of these cases.

As to treatment, occasionally in cases of intermittent hemoglobinuria—and I may say that such cases are comparatively rare in my experience—quinin used cautiously may be of benefit. But as a rule in the cases of continuous hemoglobinuria I do not think that quinin should be administered. In the first place, it is not indicated, as the parasites are not usually present, and when present its administration has aggravated the condition in my experience, as the two following cases will show: In the first case of the series of the 19 cases referred to above, parasites were observed during the course of the disease, on the third day when the urine had begun to clear. Following Bastianelli's rule, I determined to administer quinin. Seven and a half grains were given hypodermatically and four grains ordered per os every four hours. Two hours after the first dose the urine became black, suppression and death following during the night. Whether this was due to the sporulation of a new group of parasites or to the quinin administered, I am unable to say.

In case number ten of the series, parasites were observed during the course of the first day of black water when the

urine was clearing. Quinin was administered and a few hours afterward black water returned with an aggravation of all the symptoms. Quinin was immediately discontinued, and the patient recovered.

DR. W. S. THAYER, Baltimore—There is little of value that I can say which has not already been said by those who have had much more experience with this condition than I. Hemoglobinuric fever does not occur in Baltimore. Those cases that I have seen I have visited at distant points—in Virginia, Tennessee and North Carolina. My knowledge on the subject has been obtained mainly from literature. One should remember that hemoglobinuria is not a symptom proper of malaria; it is a condition for which malaria opens the way; its remarkable limitation to special malarial districts is also well known. But one should further remember that hemoglobinuria occurs as well in a variety of other infectious diseases. It may complicate typhoid fever, yellow fever or smallpox. In malaria it may occur at the height of an acute paroxysm when parasites are present in the circulation. In many cases, however, the malarial attacks disappear on the first outbreak of hemoglobinuria, and parasites can no longer be found in the blood. Again, the condition occurs in patients who have recovered for a greater or less length of time from their acute malaria and are in a condition of postmalarial cachexia. This is often the case. In certain parts of this country the disease is met with more frequently in the late fall, at about the time of the beginning of frosts. I believe that it is fair to state that, in the majority of cases, within twenty-four hours of the onset of the attack of hemoglobinuria, the parasites of malaria are not to be found in the blood. If the case, however, be left to itself relapses of the malaria will follow sooner or later in many instances.

Quinin is of no more value in the treatment of the hemoglobinuria as such which occurs in connection with malaria than it would be in hemoglobinuria connected with such diseases as yellow fever or typhoid fever or smallpox. Quinin is of value in removing the ultimate cause—the malarial parasite; it is of no value in the treatment of the immediate conditions on which the hemoglobinuria depends. If the parasites do not disappear from the blood it seems to me that we are bound to administer quinin. If, in a given case, one suspects that the patient has pernicious malaria and microscopic examination of the blood is impossible, quinin should certainly be given at the onset of the trouble. If, however, after twenty-four hours no parasites are present in the blood it may be better to postpone quinin treatment until later.

With regard to the deleterious effects of quinin: True quinin hemoglobinuria must be of the greatest rarity in this country. Cases have been reported, especially in Sicily, in which the most minute doses of quinin have produced violent attacks of hemoglobinuria, cases in which there can be no doubt as to the nature of the condition. These instances depend probably on individual susceptibility.

With regard to the method of administration of the drug it is hardly worth while to speak. Quinin acts most promptly when given intravenously, and the dihydrochlorate gives excellent results when thus administered.

DR. WALTER SHROPSHIRE, Yoakum, Texas—With regard to the assertion by Dr. Krauss that I studied hemoglobinuria by proxy, I want to say that no one examined these cases but myself. I reported 29 cases in the series, and I had some I did not include because many of them were rather indefinite—I could not give in them a fair and honest consideration of the subject. Among the 29 cases there were but 2 deaths. In one of these a physician asked me to attend a patient for him, but refused to allow me to treat the case in my own way. This patient had a mild paroxysm every morning for three mornings and then hemoglobinuria. I had promised this physician to give the patient calomel and withhold quinin until it acted. I saw this patient at 4 p. m. one day and I realized the mistake in giving him calomel and not quinin till after it acted, for scarce time for the calomel to act remained before the next paroxysm was due, but I had promised to treat the case according to the physician's expressed wishes, and I gave him calomel. Of course it did not prevent the next paroxysm. When I returned home I asked that physician never to send me to another of his cases instructed. The next morning this patient had another paroxysm, entire suppression of urine and a fatal end followed.

The other fatal case was one in which there was a distinct nephritis present. He died on the sixth or eighth day in spite of the use of quinin. Thus out of 29 cases only 2 deaths were recorded, and one due to the non-use of quinia.

The pathology of the disease has been overlooked. Ewing reports examinations of kidneys after death in one case, and he said he was unable to find or demonstrate the parasite in the peripheral circulation, but at autopsy the kidney capillaries were found to be filled with them. In every case at autopsy in the pernicious form the parasites are found in the spleen and the brain in comatose forms, and stomach and intestines in the choleric or enteric forms.

If the parasites are to be found congregated in such situations in forms when symptoms are referable to it, why not in the kidneys in this form? The fact is they have been where autopsy was had and adequate examination made in reference to the non-appearance of the parasites in the peripheral blood. I should like to refer the secretary to one of his own cases, where it was found on the third day that the peripheral blood contained them after repeated negative examination. It has been noted that in the pernicious form of the fever the parasite seems to leave the peripheral circulation and invades the central circulation and organs, hence we can not depend on examination of the blood from the peripheral circulation as a guide to our therapy in this form of disease.

New Appliance.

AN EASILY DETACHABLE PLASTER-OF-PARIS CAST.

CHARLES O. BECHTOL, A.B., M.D.
CHICAGO.

It is the purpose of this paper to present a method of applying plaster of paris to fractured limbs which we believe to be new. The earlier idea of good treatment for a fracture was absolute immobilization. This was brought about by splints made of numerous materials and by bandages made stiff with various substances, i. e., white of egg, starch, and dextrin. Plaster of paris was first used for this purpose in Spain, but Kluge of Berlin, in 1829, first made a careful study of the application of plaster to fractures. This method of complete, long immobility of a part, accompanied sometimes by a too tight bandage, brought occasional loss of limb, constant stiffness of neighboring joints and atrophy of muscles and numerous unfavorable and unpleasant conditions.

The most radical departure from the old methods is expressed by Lucas Championnière in his "Traitement des Fractures par le Massage et la Mobilization" and by his followers. They believe that complete immobilization only prevents the first pain and friction of the broken ends of bone; that it imperfectly restores form; that subsequent swelling may reproduce deformity and that it does not favor callous formation or bony union. M. Canay proved that the broken bones of a dog if absolutely immobile would not unite and that human ribs, which can not be put entirely at rest, are the quickest to heal of any bones of the body. The treatment of fractures with massage and mobilization is limited to those cases which are not compound, have no large blebs and which have no great mobility or tendency of the deformity to recur. Its field is evidently narrow even if the patient could be under close enough observation to make its application possible.

The ideal treatment comprehends the best of each of these two widely different methods, i. e., absolute immobility during a part of the time to insure perfect position of the ends of the bones and normal lines and the ability to quickly remove an absolutely immobilizing apparatus that the parts may be inspected, massaged, hot water be applied and passive motion performed. A home-made splint requires more time in

the making and in the application than a good cast and it is at best an awkward, unsightly thing, which is constantly working out of place. The fracture-box requires the patient to remain in bed and is used now only in cases where the swelling is unusual or large blebs are present. Factory-made splints never fit. There is a class of perfect-fitting, detachable splints, made by impregnating layers of cloth with plaster cream, which approaches perfection. Some of these are applied anteriorly, some posteriorly and still others used as side splints and held in position by a roller bandage. The best of this class is the Bavarian splint, but it, like the others of its class, is objectionable because of the time consumed in

Figure 1.

the making (at least one hour) and the amount of plaster scattered about.

The author's cast was designed while he was a house physician at Alexian Brothers' Hospital, Chicago. It was used satisfactorily by him on about forty cases and is still being used by his successors. This cast is applicable to any part of an extremity where a splint or a cast can be used.

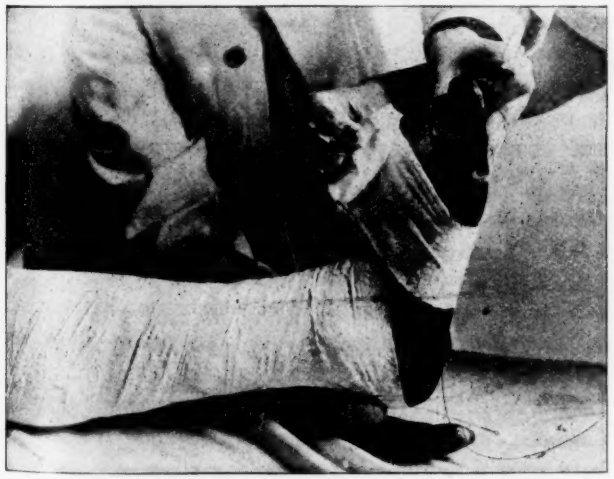

Figure 2.

For convenience a cast for Pott's fracture is described. The foot and leg are covered with a stocking or sheet cotton and a Gigli wire saw applied in the median line, anteriorly and posteriorly—these to be held in place by an assistant who also holds the fractured leg in the proper position. (Fig. 1.)

A few turns of the plaster bandage are then taken around the leg to hold the saws in place. A third saw is then applied along the sole of the foot and secured by a few turns of the bandage. (Fig. 2.)

The assistant can now busy himself with keeping the parts in proper position and alignment. The cast is then completed by applying successive turns of the plaster bandage, rubbing each turn smooth until it is in the closest possible contact with the one directly under it. It is well to make this cast a little thicker than the ordinary circular cast and care is necessary to make the portion over the foot and around the heel of equal strength as the rest of the cast. The only precaution necessary is to keep both ends of each saw free and avoid bending the saws at a sharp angle.

By the time the last bandage has been put on and the cast made smooth by rubbing with the flat of the hand, it will be hard enough to saw off. It need not be dry. A suitable handle or a small nail is attached to the loop in the end of the Gigli saw and by pulling the saw steadily until it moves freely the cast can be cut through in about ten seconds, leaving

Figure 3.

two straight edges. Fig. 3 shows the second stroke of the saw. The posterior and foot saws are removed in a similar manner and an ordinary roller bandage is put around the cast while it is still in position on the leg to hold the two halves together.

Figure 4.

If a stocking is used it must be split with a pair of scissors along the saw cut before the cast is removed and it then forms a good lining. If sheet cotton is used the leg should be covered by a new layer before reapplying the cast to take up the space occupied by the old cotton and form a comfortable lining.

This cast meets all the requirements of the modern treatment of fractures and has the double advantage of ease and rapidity of both application and removal. It is especially suited to Colles' fracture, because of the ease with which such a perfect-fitting splint can be made and the readiness with which it can be removed for inspection, massage and hot applications.

The Plaza.

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STREPTOCOCCI AND THEIR RELATION TO SPECIFIC DISEASES.

When bacteriologic methods were first applied to the systematic study of human diseases, it was soon learned that streptococci were widely distributed in connection with various morbid processes. Control investigations in connection with normal individuals showed them to be also commonly, if not constantly, present on various mucous surfaces of the body, especially those of the mouth and throat. When more exact bacteriologic methods had been elaborated and the streptococci, which were isolated by the plate method, were studied as to their tinctorial, cultural and morphologic peculiarities, it was thought by careful investigators that the streptococci coming from different diseases could be distinguished by certain characteristic properties. On further study, however, it was found that these properties were not constant, but could be acquired or lost by each of the supposed forms. With the advent of agglutination and immunization tests for the detection and differentiation of bacterial species, it was hoped that if different forms of pathogenic streptococci existed they might be separated by these means.

From reports published by various investigators, we were led to believe that our hopes had been realized. By the application of these methods of study, Fritz Meyer claimed to have differentiated a variety of streptococcus which was characteristic for acute articular rheumatism, and which was the actual cause of this disease. He concluded that by agglutination phenomena the human streptococci can be separated into absolute varieties. For many years it has been known that streptococci are frequently associated with many of the complications of scarlet fever. Baginsky and Sommerfeld found them in the heart's blood and bone-marrow in almost every fatal case, and they appeared to be almost ready to assign them to a causal rôle in this disease. Moreover, Moser now applied agglutination tests to the streptococci cultivated from cases of scarlatina, and concluded that the scarlatinal streptococci were undoubtedly different from those found in other human diseases, such as erysipelas, sepsis, phlegmon, etc. Both Moser and Baginsky claimed to obtain favorable results in cases of scarlatina by the injection of antistreptococcic sera. The serum employed by Moser was obtained from horses which had been injected with cultures of streptococci obtained from cases of scarlatina and without previous passage through animals. Baginsky's serum was prepared by Aronson by the injection of horses with streptococci which had been rendered very virulent by manifold passage through mice. Each author claims special virtue for his own serum. Just as we were in high hopes that at last there was something tangible in our means of separating varieties of streptococci and in combating their effects in human disease, further studies have apparently shown that our expectations were without foundation. The statement of Baginsky that streptococci are constantly present in the blood in cases of scarlatina has been found to be untrue, except in cases terminating fatally after the third day of the disease. In a series of 100 cases in which a bacteriologic examination of the blood was made during life, Hektoen[1] found streptococci in only 12. Deneke examined the blood bacteriologically in a long series of fatal cases of scarlatina. In cases dying during the first 3 days of the disease, he found streptococci only once, but in cases which terminated fatally after the fifth day, streptococci were always present. He holds the idea that streptococci have any essential causal relation with scarlatina to be untenable. Rumpel has used Aronson's serum in 6 severe cases without a recovery, and Deneke has used it in 6 cases without any convincing benefit.

Aronson[2] has recently published some extensive observations on these matters. He has immunized a large number of horses with individual streptococci from various human diseases, the bacteria not having been previously passed through animals, and he has tested the agglutinating and protective properties of the sera from these horses on a great variety of streptococci. He concludes that it is impossible to determine the origin of any streptococcus culture by microscopic examination, by cultural methods, or by agglutination and immunization methods. He is unable to consider the streptococcus as the cause of so typical and characteristic a disease as scarlatina, but admits that it is the cause of most of the severe complications. He states that there is no specific scarlatinal serum, but urges the use of his antistreptococcic serum to combat complications. These observations appear to upset all our ideas as to streptococci which are characteristic of scarlatina and rheumatism. They also show that Aronson's serum which has been used by Baginsky is not to be considered as a specific scarlatinal serum as has been supposed to be the case by many. We are left with only a specific treatment for streptococcus infections in general, which must be subjected to further trial by impartial observers before it can be placed in its final place among our means for combating disease. Our experience in this connection is similar to that in many others. Certain bacteria have often been described as causes of diseases on insufficient data, and without accurate and discriminating observations. Control observations have too often been omitted, and can not be too strongly insisted on in all scientific investi-

1. THE JOURNAL A. M. A., March 14, 1903, 685.
2. Deut. Med. Woch., 1903, No. xxv, 439.

gations. The cautions we urged in our recent editorial[3] regarding extraordinary precaution in the whole technic of the agglutination test are especially apt here. Streptococci have been most elusive in escaping all efforts to obtain accurate knowledge as to their mode of action and to learn any means of overcoming their effects. Present failures must serve to stimulate further study with confidence that in time the difficulties which have so far been unsurmountable will be overcome.

PRIVATE PRACTICE AND HOSPITAL PRACTICE.

If one looks about him and considers the changes which are taking place in medical education, it is easy to see that there is a growing sentiment in favor of the extension of the plan of employing as teachers in medical colleges men who are not engaged in private practice. In the better medical schools the chairs of anatomy, physiology and pathology are already filled with men who devote their whole time to teaching and investigation. We understand that one of the Eastern universities has recently appointed a physician to the chair of internal medicine on the condition that he cease to do private practice and devote himself entirely to the work of the hospital and school. A leading university in the Middle West has advocated strongly the employment of two kinds of professors on its clinical staff, first, professors who give all of their time and energies to the university hospital and medical school, and, second, professors who give a part of their time to the hospital and medical school and the rest of it to private practice.

The advantages of having both kinds of professors in the clinical faculty are sufficiently obvious. Experience in the fundamental branches has shown clearly the advantage to the medical college of having men who, unworried by the cares of private practice and unfatigued by the labor the latter entails, have plenty of time to teach their subjects adequately to medical students and beside to pursue original investigations which contribute to the advancement of science in their particular fields. There can be no question that internal medicine, surgery and obstetrics will be better taught than they are now and that more rapid advances in diagnosis, prognosis, pathogenesis and treatment will be made when scientific men are similarly related to the clinical branches in our universities. Such men, paid salaries large enough to permit them to live respectably and maintain their families properly, could divide their time between the wards of the university hospital on the one hand and the hospital laboratories and library on the other, making observations in the former which would lead to the planning and carrying out of experimental work in the latter. The results of the laboratory work in turn would become applicable to improvement in the methods of study and treatment in the wards. The hospitals so used would probably be comparatively small and especially designed for purposes of investigation; only a few diseases need be studied at any one time, as the investigator prefers to confine his experimental researches to a rather small area for purposes of concentration and intensive study rather than to distribute his attention in any given period over too wide a range. Workers in such research hospitals would not wish to be hampered by too much teaching; they would prefer to be influential by the example they set of thoroughness and originality in procedure rather than by precept. They would gather about them the more advanced and more capable students and lead them into the higher walks of clinical study. By publication of the results of their own observations and experiments they would extend their teaching to other cities and to other lands far beyond the group of students in the school which employed them.

Great as would be the power of a few men of original ideas with strong personality in such research hospitals, the medical school would need also the teaching which the private practitioner of the better sort is so well prepared to give. For private practice is very different from hospital practice, at any rate as the latter exists at present. The hospital physician sees chiefly people who are very sick, men and women who are confined to bed with acute or severe chronic disease. Only in the outpatient department of the hospital does he see the minor ailments with which private practice has so largely to deal; further, in that department the cases are those of charity patients whose slight ailments differ largely from those from which the more well-to-do classes suffer, and when they are the same the treatment has to be very different, perforce, for the poor from that employed for those who are able to pay. The private practitioner is appealed to by men and women in active business or social life in the beginnings of disturbances; his patients are very often not incapacitated, but they are not well; they desire to be told how to correct their lives, what to eat, how much exercise to take and the like. While it is true that the physician in private practice when a teacher in a medical school can not show these patients to his pupils any more than the hospital teacher can, still he sees such patients daily and he can tell his students about them and give them at least some inkling of the best way of handling them. The systematic, vigorous, scientific training of the investigator in the research hospital can thus be most profitably supplemented by the intuition, tact and experience of the successful private practitioner.

COMPULSORY POSTMORTEMS.

Every physician must have experienced the feeling that is expressed in the following from a daily newspaper editorial. It is entitled "Compulsory Postmortems—They Would Weed Out Criminally Ignorant Doctors and Add Vastly to Medical Knowledge":

When a human being dies this should be the first thought in the mind of the lawmaker and of the bereaved relatives: how can this death, which now causes individual sorrow, be made

3. THE JOURNAL A. M. A., Aug. 8, 1903.

useful to all human beings? How can it be made a defense of others in future?

Every doctor will tell you that invaluable information is lost because a sentimental feeling forbids making postmortem examinations. The fond relatives can not bear the thought of an operation being performed on the body of one that they loved. It is useless to tell them that the death is mysterious, that an explanation of its cause might save many lives. They think of nothing but the particular individual now dead. Out of sentiment for the one that has gone beyond help they refuse to help others.

The objections to postmortems are mainly sentimental, but to a certain extent they are fostered by religious beliefs. The same mistaken notions which have led an English bishop to declare against cremation induces many people at the present time to consider an examination of pathologic tissues sacrilegious and resist it with all the power they can exert. We believe, with the editorial quoted, that public opinion should be educated in this matter. "Almost everybody," it says, "now submits the corpse of his friend without hesitation to the process of embalming, which is a repulsive and almost utterly useless postmortem operation." The fact that a little knowledge of the conditions might be of utmost value to the living is never considered by the public, and yet it is a curious fact that when insurance companies demand an examination there is little difficulty in securing permission. Such is the power of self-interest as opposed to sentiment and religious objections.

What the editorial says in regard to the weeding out of unfit physicians by exposing their mistakes is in part true, though it would be unfair to say that mistakes are confined to the ignorant and unfit. The best of us make mistakes, and we desire postmortems in order to avoid making mistakes in the future. Therefore, any facts that the postmortem reveals which are contrary to the expressed views of those treating the patient before death should be given wide publicity before the medical profession. To give them to the public, however, would, in some cases, work an injustice. Still it would not be a serious harm and competent honest physicians could easily live down any possible temporary discredit that it might bring them.

The editorial further urges that compulsory autopsies would do away with much of the present antivivisection agitation by rendering vivisection useless. This argument has some force, though autopsies could not altogether fill the place of animal experimentation, and we believe that the same sentiment which opposes vivisection would oppose making postmortems a means of adding to knowledge. In the main, however, the article quoted in part contains so much good sense that we are glad to endorse it. We wish that every dubious diagnosis could be verified or corrected by an autopsy. The information obtained in such a case would be invaluable, especially in our larger centers where competent operators could be obtained. There is no true physician, we believe, but who would welcome such a regulation. Something, however, can be done in the way of public education as to the necessity and uses of the postmortem examination and more perhaps than by actual regulatory enactment.

ANOTHER DANGEROUS USE OF CELLULOID.

A dealer in London was recently arrested for selling so-called amber and gold cigarette holders which were retailed at the price of 6 shillings and produced at the cost of a shilling or less from celluloid and gilt metal. Celluloid is a useful substance, but it has its drawbacks. Its employment as a cigar holder seems to possess about as many drawbacks as any other use that might be suggested; it is not long since we read of an unfortunate Parisian whose celluloid nose blew up. We are afraid that some of these cigar holders will be found a source of danger to their possessors. The old-fashioned trick of loading pipes and cigars with gunpowder is humane in comparison with the possibilities of a practically gun-cotton cigar holder held in the mouth and ignited from a partially burned cigar or cigarette. We wonder how many "amber" celluloid cigar holders are in use and how soon we shall hear from them.

CAT GRAVEYARDS.

It is reported in the daily press that a society for the prevention of cruelty to animals in a leading Eastern town is promoting the establishment of a cemetery for dogs and cats and is soliciting subscriptions therefor. The city where this society exercises its function is already notable as the only one in the country containing a well-built—and we believe it is also well-endowed—asylum for homeless cats. While we do not object to zoöphily when it does not interfere with more important matters, it does seem to us that there is danger of overdoing this sort of thing. While so large a proportion of our own species suffers from neglect, and needs care in hospitals and asylums and lacks the means of decent burial, to establish hospitals and cemeteries for dogs and cats seems to us a *reductio ad absurdum* of benevolence. All animals should be humanely treated and, when they can not be cared for, should be mercifully killed to prevent suffering or abuse; some even, in memory of lives they have saved, deserve more, but a cemetery for dogs and cats will be pointed out as a curiosity and a proof of human folly rather than an evidence of intelligence or of humanity.

HYPNOTISM AN ANESTHETIC FOR MAJOR OPERATIONS.

The successful amputation of a limb under hypnotism is reported[1] in a patient suffering from necrosis of the bone and severe ulceration of the leg. In a previous operation the patient bore the anesthetic badly and hence wished to be relieved of the necessity of taking another. Hypnotism was used as a last resort. The operator refused to work unless the means for anesthesia were at hand, but fortunately their use was not required. The patient went through the operation successfully, and the temperature at no time was above normal. Recovery was uneventful except for a slight hemorrhage and sloughing of a portion of the flap, which was not accounted for. While we believe that hypnotism as a therapeutic remedy has long passed its heyday, its occasional use will doubtless still be heard from and may be—like other seldom-used but once-in-a-while-effi-

1. The Lancet, London, August 22.

cient remedies—found of value. We must take into account the fact that susceptibility to hypnotism is very variable, and while fifty or sixty years ago large numbers of cases of operations under this method were reported in India, it speedily passed out of use. Few operators, we venture to say, would ever now rely on it. As the *Lancet* says in its comments on the case, it can only be regarded to some extent as a curiosity, though the issue was favorable.

PHYSICIANS' COMMISSIONS ON REFILLED PRESCRIPTIONS.

THE JOURNAL has received through a correspondent a copy of a circular letter sent out by a drug manufacturing firm, which we do not care to advertise here by a name, proposing to allow physicians 10 per cent. commission on the refills of prescriptions of the firm's preparations. They argue that the physician is entitled to something on the refilling of his prescriptions, but, under the usual practice, he alone of the trio—manufacturer, retailer and prescriber—does not profit. It is easy to see how the manufacturer hopes to increase his profits if the physician will only co-operate. The professional aspect of the transaction is another thing. No matter how excellent the products of this firm may be, and we know nothing about them, no ethical physician would accept a commission for prescriptions and much less we should say for their unauthorized repetition, as is implied in the circular letter referred to. It is only a bid for more business, with a rather cleverly devised trap for physicians included. If the ethical argument is not sufficient, those who are incapable of fully appreciating its force may also consider the fact that advertising proprietary remedies and encouraging the public into the practice of self-dosing with them, as is suggested by the circular, is a bad practice financially for the physician and physically for the patient.

Medical News.

CALIFORNIA.

In Memory of Dr. Gardner.—In memory of the late Dr. Matthew Gardner, San Francisco, and to show the high respect they bore him, the San Francisco County Medical Society, at its meeting, August 11, passed resolutions.

State Board Election.—The State Board of Medical Examiners has elected the following officers: Dr. Dudley Tait, San Francisco, president; Dr. Lewis A. Perce, Long Beach, vice-president; Dr. Charles L. Tisdale, Alameda, treasurer, and Dr. George G. Gere, San Francisco, secretary.

In the Toils.—"Dr." H. G. Wright, Cloverdale, was fined $100 for practicing medicine without a license in that town.——Ma Too Ting of Stockton, twice tried for practicing medicine without a license and on whose case two juries have disagreed, has been discharged.——"Dr." Myers, an optician of Hanford, found guilty of impersonating an agent of the State Board of Health and sentenced to 100 days in jail and a fine of $100, has been surrendered by his bondsmen, and is in jail in Fresno.

Physicians Injured.—Dr. William D. McDougall, San Jose, was seriously injured in a runaway accident, July 24.——Dr. Malek A. Southworth, San Jose, who was injured July 3, is rapidly recovering.——Dr James H. McLeod, Santa Rosa, was thrown from his buggy, July 7, sustaining a strain of the arm and a severe scalp wound.——Dr. Charles E. Turner, Vallejo, was thrown out of his buggy in a runaway accident, August 7, and fell on his back, causing concussion of the spine.

Personal.—Dr. Thaddeus S. Up de Graff, Pasadena, has returned from a trip round the world.——Dr. Dwight H. Trowbridge has been made a member of the Fresno Board of Health, vice Dr. George H. Aiken, resigned.——Dr. William F. Snow, Stanford University, has been appointed deputy health officer of Santa Clara County during the absence of Dr. Ray L. Wilbur in Europe.——Dr. W. R. T. McLain, Los Angeles, sailed for Europe, August 19.——Dr. and Mrs. Norman H. Morrison have returned to Los Angeles, after a trip to Hawaii.——Dr. Silas Johnson, Los Angeles, has returned to his work as a medical missionary on the west coast of Africa.

GEORGIA.

Georgia to Kansas.—Dr. Middleton L. Perry, Milledgeville, has been appointed superintendent of the new state hospital for epileptics at Parsons, Kan.

Hospital Staff Elects Officers.—The staff of Griffin Hospital has elected Dr. Robert H. Taylor, chairman; Dr. Thomas J. Collier, vice-chairman, and Dr. Joseph M. Thomas, secretary and treasurer.

State Board of Health Bill a Law.—The governor signed the State Board of Health bill, August 17. The bill provides for a board of eleven members, one from each congressional district, with a secretary whose office shall be in the capitol. The secretary is to receive a salary of $2,000 a year. The board elects its own president. The members receive no salaries, but are paid $5 a day when in attendance on meetings.

Appoints State Board of Health.—Governor Terrell has appointed the following members of the State Board of Health: Drs. F. M. Ridley, La Grange; Willis F. Westmoreland, Atlanta; Robert M. Harbin, Rome; Giles Hathcock, Belton; Charles Hickes, Dublin; William W. Owens, Savannah; Augustus P. Taylor, Thomasville; Millard S. Brown, Fort Valley; Howard J. Williams, Macon; Samuel C. Benedict, Athens, and James B. Morgan, Augusta.

ILLINOIS.

Personal.—Dr. Thomas W. Curry, Streator, has returned after an absence of five months in Europe.

Hospital Opened.—The new St. Mary's Hospital, Rockford, remodeled and newly equipped, is now open.

New Hospital for Evanston.—A new hospital, to be called the Grove House for Convalescents, is to be established in North Evanston. The building will cost $5,500 and will be ready in the early spring.

Smallpox Hospital Out of Commission.—After having maintained a smallpox hospital for two months, the authorities of Libertyville, Lake County, have decided that the town is free from smallpox, and have closed the hospital.

Magnetic Healers Held.—In the case of "Drs." Parker and Hall, the alleged magnetic healers, Judge Green, sitting at Pekin, has held that they are not entitled to their release, thereby intimating that the state has a case against them of sufficient strength to warrant their being held to await the action of the grand jury.

Chicago.

Assaulted While Saving Life.—While working to save the life of a woman who had swallowed carbolic acid Dr. William H. Crowley was attacked and beaten by a man. It was later alleged that the man was concerned in the woman's reason for attempted suicide.

Smallpox More Fatal.—The Department of Health reports that smallpox is of a more serious type this year than last. In 1902 there were 338 cases with only 5 deaths—a mortality rate of less than 1.5 per cent. Thus far this year there have been 346 cases and 45 deaths—a mortality rate of 13 per cent.

Medical Colleges Taxed.—The board of review has decided that medical colleges operated for profit shall be taxed on their equipments. Rush Medical College was taken under advisement; Hahnemann Medical College was not taxed; Chicago Homeopathic Hospital was taxed on $4,000, and the American College of Medicine and Surgery, Bennett Medical College and Jenner Medical College on $2,000 each.

Dearborn Medical College.—A new evening medical college held its opening exercises, September 1. Judge R. S. Tuthill delivered the opening address. About 175 students make up the initial enrollment. Dr. L. Blake Baldwin is president of the college and Dr. James L. Wells, secretary. The college building is that formerly occupied by Bennett Medical College, and later by the Chicago College of Pharmacy. A clinical building is now being erected.

Personal.—Dr., Mrs. and Miss Hotz have returned from a visit to Yellowstone Park.——Dr. Charles H. Parkes has returned after a year in Europe.——Dr. Joseph P. Smyth, has been elected high medical examiner of the Independent Order of Foresters.——Dr. and Mrs. Arthur D. Bevan are spending August in the White Mountains.——Dr., Mrs. and Miss Chew will return from Europe early next month.——Dr. and Mrs. Philip S. Doane have returned from Harbor Point, Mich.——Dr. Henry H. Everett has returned from a ten weeks' trip through New Mexico.——Dr. J. F. Biehn has been appointed assistant city bacteriologist, vice Dr. L. A. Kiernulff, resigned.

The Typhoid Situation.—The Department of Health reports that physicians are asking for far more laboratory examinations of suspected cases of typhoid fever than formerly. The disease is not on the increase to any extent. An investigation of twenty-two recent cases in the "ghetto" of the Nineteenth Ward was made by Medical Inspector Dr. Palmer Findlay, who reports that in sixteen families, where positive information could be obtained, untreated (unboiled) hydrant water was habitually used. No connection could be established between the cases and the milk supply. The sanitary conditions—including plumbing, vaults and closets—were "O. K.," "clean" or "fair" in fourteen cases and "bad," "full" or "in a filthy condition" in eight cases. The dense ignorance and unclean European habits of the denizens were the only obvious causes of the excess of the disease in this district.

INDIANA.

Gift to Hospital.—In accordance with the wish of her husband, the late Dr. William C. Eichelberger of Terre Haute, Mrs. Eichelberger has given all his surgical instruments and medical books, safe, office fixtures and furniture to the Union Hospital.

Dr. Brayton's Illness.—Dr. Alembert W. Brayton, Indianapolis, editor of the *Indiana Medical Journal*, who has been ill for several weeks, was operated on for abdominal abscess, August 25. The operation was successful, and Dr. Brayton is expected to make a rapid recovery.

Personal.—Dr. George D. Kahlo has succeeded Dr. Allison Maxwell as dean of the Central College of Physicians and Surgeons, Indianapolis. Dr. Maxwell will retain the chair of clinical medicine.——Dr. John A. Martin, La Fayette, surgeon at the Soldiers' Home, has resigned.

Deferred Union of Medical Colleges.—It is said that no further progress has been made in the proposed amalgamation of the Medical College of Indiana and Central College of Physicians and Surgeons. No definite conclusion has been reached, and it is said that each college will hold a separate session this year. Each college has issued its catalogue for the coming session.

In Trouble.—Mrs. Effie Watson, Martinsville, has been fined $25 for practicing medicine without a license. She is alleged to have practiced "eycopathy."——"Dr." Frank J. Sazofsky, also of Martinsville, has been fined $25 for practicing medicine without a license.——"Dr." James Charles, a manufacturer of electrical appliances of Richmond, has been indicted by the grand jury for practicing without a license.——An itinerant of Van Wert, Ohio, was recently arrested in Shelbyville for practicing without a license and selling medicine on the street, and was released on giving bond for his reappearance.

Disease and Death in July.—The regular monthly bulletin of the State Board of Health says:

The health for July throughout the state is slightly better than in the preceding month, and was also better as compared with the corresponding month of last year. Diseases of the digestive tract were most prevalent. There was a great decrease in smallpox, as compared with the preceding month and with the corresponding month of last year. The order of prevalence of diseases was as follows: Diarrhea, cholera morbus, rheumatism, cholera infantum, typhoid fever, dysentery, tonsillitis, intermittent fever, bronchitis, scarlet fever, inflammation of bowels, measles, whooping cough, pleuritis, pneumonia, diphtheria and croup, erysipelas, influenza, puerperal fever, cerebrospinal meningitis.

There were 104 cases of smallpox with 4 deaths reported in 21 counties. In the corresponding month of last year there were 502 cases reported, with 15 deaths in 46 counties.

An interesting fact in conjunction with deaths by violence appears in the report from Evansville, where 10 persons were killed by mob violence. There were, in all, 13 murders during the month. The suicides numbered 30; males, 22; females, 8. The accidental deaths numbered 159. The deaths from tuberculosis numbered 360; males, 147, and females, 213. The married persons between the ages of 18 and 40 who died of the disease, leaving orphans, was 98. One hundred and fifty-two mothers died and 44 fathers, leaving 196 children under the age of 12. The total number of deaths from all causes for the month was 2,765, an annual rate of 12.9 per 1,000. The rate in the corresponding month last year was 13.6 per 1,000. By certain ages the deaths were: Under 1 year of age, 541, or 20.7 per cent. of the total; from 1 to 5 years, 214; 5 to 10 years, 55; 10 to 15 years, 75; 65 and over, 679, 26 per cent. of the total. By comparison with the same month last year we find the deaths of children under 1 year of age were greater. The percentage for June, 1902, was 19.6 per cent. of the total deaths. Some important causes of deaths were as follows: Tuberculosis, 362; typhoid fever, 63; diphtheria, 13; scarlet fever, 12; measles, 6; whooping cough, 14; pneumonia, 77; diarrheal diseases, 313; influenza, 11; cancer, 108; violence, 102; smallpox, 4.

IOWA.

Eye Doctor Bound Over.—J. Edmund Wilson, an "eye doctor," who was arrested at Clarion, August 14, for practicing medicine without a license, has been bound over to the grand jury under bonds of $300.

Dr. La Force Improving.—Dr. D. A. La Force, one of the pioneer physicians of Ottumwa, was taken seriously ill while attending the G. A. R. reunion in San Francisco, and was in so dangerous condition that his son, Dr. William B. La Force, was telegraphed for. He is now reported as greatly improved, and is considered out of danger.

Personal.—Dr. Lewis Schooler, professor of surgery and clinical surgery in Drake University Medical Department, Des Moines, has resigned.——Dr. Earl Rice, Roland, has been seriously ill with blood poisoning following an operation wound.——Dr. Montrose Conley, Boone, has been appointed an interne in the Cook County (Ill.) Hospital for the Insane, Dunning.——Dr. James G. McAlvin, Grundy Center, will go abroad for a year's study.——Dr. Lawrence W. Littig, Iowa City, has been appointed lecturer on nervous diseases in the University of Iowa College of Medicine.

Cherokee Hospital Report.—The State Hospital for the Insane at Cherokee, opened August 15, 1902, had at the end of a year 619 inmates, 347 men and 272 women. The proportion of recoveries was 26 per cent., and of mortality 6.5 per cent. Of those who died, 24 per cent. were more than 70 years old. Since the opening of the inebriate department, Oct. 10, 1902, 151 males and 3 females have been admitted. Of these 28 escaped, and with 61 paroles, one death and transfers only 35 remained at the time of the report. Of the 154 patients, 118 used whiskey; 18, alcohol; 13, beer, and the remainder cocain or morphin.

KENTUCKY.

Dysentery Epidemic.—Dysentery is reported as epidemic in the Polkville neighborhood.

Verdict Against Physician.—In the case of G. B. Bailey against Dr. W. M. Lottridge, Newport, wherein $10,000 damages was claimed for alleged malpractice in the care of a broken leg, a jury awarded the plaintiff $2,000.

Personal.—Dr. Joseph M. Mathews, Louisville, has resigned from the faculty of the Hospital College of Medicine, and will devote himself to private practice.——He has been succeeded by Dr. George A. Hendon, formerly assistant to the chair of surgery.

House-to-House Inspection.—Health inspectors under the direction of Dr. Maverell K. Allen, health officer of Louisville, are making an inspection of the sanitary condition of every house in the city. The reports of the inspectors will be filed with the health officer, and will be kept up to date.

College Improvements.—The trustees of Central University have sanctioned the expenditure of about $15,000 for remodeling the building of the Hospital College of Medicine, Louisville. Two new laboratories and new amphitheaters and section rooms are to be built, and the grounds of the school are to be beautified.

Where They Spent Their Vacations.—Dr. Joseph M. Mathews, at Harbor Springs, Mich.; Dr. Lewis S. McMurtry, in Canada; Dr. Thomas Hunt Stucky, at Atlantic City; Dr. Henry Enos Tuley, at Reserve, Wis., fishing; Dr. John G. Cecil, on the Pacific Coast and Yellowstone Park; Dr. Curran Pope, at Michigan resorts; Dr. Orville Kennedy, at Grayson Springs, Ky.; Dr. J. Rowan Morrison, at White Sulphur Springs, Va.; Dr. James S. Chenoweth, in Maine, and Dr. J. B. Marvin, at Cape Cod, Mass.

LOUISIANA.

Low Mortality.—The mortality in New Orleans for the first week in August was at the annual rate of 14.66 per 1,000 for whites and 21.98 for negroes, or a total rate of 16.60.

Personal.—Dr. Jefferson D. Bloom, house surgeon of Charity Hospital, New Orleans, for more than seven years, has resigned.——Dr. C. Jeff Miller has been elected to the chair of surgery in the New Orleans Polyclinic.

Bad Milk.—Numerous complaints have been made of the milk supply of New Orleans. Several cases of poisoning from tyrotoxicon and from adulterated milk have been reported. The City Board of Health has preferred charges against a number of milk dealers and proposes to adopt a vigorous campaign for a pure milk supply.

Sewage and Water System for New Orleans.—The work of constructing the vast system of sewage, water and drainage, which is to place New Orleans abreast of the best sanitated cities of the world, and which is to cost, roughly, $18,000,000, is already well in hand. The great undertaking is to be finally completed within the next five years. The movement which culminated in this great work followed the epidemic of fever in 1898. The system is to be fully described and illustrated in THE JOURNAL in a few weeks.

Charity Hospital Staff.—At a recent meeting of the board of administrators of the Charity Hospital, Dr. J M. Batchelor was elected house surgeon, to succeed Dr. J. D. Bloom, who resigned after a service of sixteen years. Dr. J. A. Danna was promoted from second to first assistant house surgeon, and Dr. S. W. Stafford was elected second assistant. It was determined by the board that in the future the second assistant should be selected by competitive examination. The term of house surgeon was by resolution limited to six years. The board also adopted resolutions denying the truth of the rumor as to its policy in regard to the Sisters of Charity. The latter are not to be disturbed in any way.

Mitigate Quarantine Regulations.—At a conference of the state quarantine officials of Louisiana, Alabama and Texas, held recently in New Orleans an agreement was reached, which will greatly mitigate the quarantine regulations controlling travel and commerce from Cuba to ports on the Gulf of Mexico. The following was the resolution adopted:

Resolved, That on and after August 6 all uninfected vessels from clean Cuban ports be admitted to free pratique after thorough inspection at the quarantine station, including taking the temperatures of all on board, disinfection of soiled clothing and containers and other suspected articles, either by steam heat or formaldehyd, and that passengers from Cuban ports be permitted entry without further restrictions, provided that each passenger furnishes a certificate from the chief medical officer of the Cuban port of departure stating that said passenger has resided not less than five days in Cuba prior to sailing from that island. Agents of steamship lines in Havana, on delivering their tickets to passengers, shall instruct them to place all their soiled clothes and linen in a separate bag, trunk or box in order to simplify quarantine regulations at the home port.

Should any soiled clothes and linen be found among unsoiled clothes and linen the whole package shall be disinfected.

The vessel may be disinfected at the direction of the quarantine authorities.

MISSOURI.

Due to Floods.—The death rate of Kansas City for July was the highest in the history of the city, 324 deaths having been reported. Of these, 24 were caused by typhoid fever, due to unsanitary conditions following the recent flood and the drinking of impure water.

Bacilli in Street-Car Sweepings.—The St. Louis Transit Company has begun a scientific investigation of the sweepings from street cars to discover a means of keeping the cars sanitarily clean. Bacteriologist Stolpher has submitted a report showing that as the result of his examinations of car sweepings for a week, all the cars contained tetanus and tuberculosis bacilli.

Professor Acknowledges Fraud.—Dr. Frank O. Reynolds, professor of bacteriology, microscopy and hematology in Ensworth Medical College, St. Joseph, and curator of the college museum, on account of his acknowledged connection with "the New York Hospital Company of St. Joseph," a fraudulent scheme, was requested to tender his resignation, promptly did so, and it was as promptly accepted.

To Prosecute Unlicensed Physicians.—The chief of police of St. Louis, on request of the health commissioner, has instructed each patrolman to get the names and addresses of all physicians on his beat. When the returns are complete the lists are to be sent to the health commissioner, who will sort out those known not to be reputable. Those who are found to be practicing without having complied with the state laws will be prosecuted.

NEW YORK.

New Hospitals at Albany.—Two new hospitals will be built at Albany, one a smallpox hospital, the other a pavilion for the reception and care of patients suffering from contagious disease.

For Dr. Richardson's Place.—Dr. William A. White, first assistant of the Binghamton State Hospital, has received from the Secretary of the Interior the appointment as superintendent for the Government Hospital for the Insane at Washington, D. C., vice Dr. Alonzo B. Richardson, deceased.

Buffalo Personals.—Drs. John H. Mesmer, E. J. Meyer and Henry Buswell have gone to Northern Canada on a fishing trip. ——Dr. James W. Putnam has returned from Magnolia.——Dr. Frank W. McGuire was appointed gynecologist to the Buffalo German Hospital, vice Dr. Herman E. Hayd, appointed surgeon. ——Drs. Irving M. Snow and Lillian Craig Randall are in Europe.

To Examine Condemned Criminals.—Governor Odell has appointed Dr. Eugene H. Howard and Dr. Arthur W. Hurd medical superintendents of the Rochester and Buffalo State hospitals, respectively, to examine the mental condition of Patrick Conklin, awaiting execution at Sing Sing. Dr. Henry E. Allison of Matteawan and Dr. Morris G. Ashley of Middletown were also appointed to examine Clarence Equar, awaiting execution at Auburn state prison.

Radium and Blindness.—Dr. Almon Jenkins and Mr. W. J. Hammer, an electrical engineer, are engaged in some interesting experiments with radium on a blind girl. That the optic nerve of this child is practically dead would seem to be shown by the fact that it is stated that the child saw nothing when magnesium ribbon was burned before her eyes, yet it is claimed that under the conjoined action of the *x*-ray and radium the child declared that she saw light. While there is no likelihood that these experiments have any practical bearing, they are of interest in connection with a study of the marvelous properties of the new substance radium.

Pure Water for Ithaca.—The turbine pumps which deliver water to the new Fulton plant of the Ithaca Water Company were set in motion, and the citizens of Ithaca and the students of Cornell are assured of an abundant supply of pure water Although tests had been in progress in the plant several days, no announcement was made until yesterday that it was ready for operation. Six months ago Cornell loaned to the Ithaca Water Company $150,000 for the building of the purification plant, and work has been continuous since. The water, as soon as delivered to the receiving wells, is charged with a solution of sulphate of alumina, which forms a white, flaky precipitate. The water is then passed into coagulating basins, where 70 per cent. of its impurities settle. It is then passed through six filters of a capacity of 3,000,000 gallons daily.

OHIO.

Hospital Gets Library.—Dr. James C. Culbertson, Cincinnati, editor of the *Lancet-Clinic* and member of the board of education, has given his medical library of over four hundred bound volumes to the City Hospital medical library.

Personal.—Dr. Peter Donnelly, Toledo, has been appointed a member of the local board of health.——Dr. Guy H. Williams has been appointed assistant physician at the Columbus State Hospital, vice Dr. Ralph Holmes, who has accepted a similar position at the Ohio Hospital for Epileptics, Gallipolis.——Dr. and Mrs. Charles J. Shepard, Columbus, sail for Europe on the *Molkte*, October 1.

Almost Free from Smallpox.—Dr. C. O. Probst, secretary of the State Board of Health, announced, August 20, that Ohio was practically free of smallpox. There was then only one place in Ohio that had anything bordering on an epidemic, there being 18 cases at Massillon. Cleveland has discharged the last patient from the pest house and is free from the pest for the first time in many months.

New Hospital in Cleveland.—A new hospital has been opened in Cleveland under the name of "The Mt. Sinai Hospital of Cleveland, Ohio," by philanthropic Jewish citizens. It is strictly non-sectarian. It is well equipped to accommodate thirty-five patients, with ward and private beds. The staff is made up as follows: Surgeons—Drs. George W. Crile, Carl A. Hamann and Frank E. Bunts; gynecologists—Drs. Marcus Rosenwasser, W. Lincoln and John J. Thomas; orthopedic surgeon—Dr. Walter G. Stern; pediatrists—Drs. Nathan Weidenthal, and McMichael; eye—Dr. William E. Shackelton; nose and throat—Dr. Henry B. Stotter; skin—Dr. Samuel Rigelhaupt; nervous diseases—Drs. Moritz Lowenthal and Isidor Belkowsky; internal medicine—Drs. Arnold Peskind, Friedman, Emanuel Rosenberg, Louis Robecheck, David B. Steuer, Alfred S. Maschke, Daniel Heimlich, Kaplin, Isador J. Propper, Maurice Budwig and Myron Metzenbaum. Dr. Bunts is president and Dr. Stern secretary.

PENNSYLVANIA.

Typhoid in Schuylkill County.—An epidemic of typhoid fever is reported in Schuylkill county, there being many cases at Ashland, Pine Grove and Pottsville.

Dogs Quarantined.—The State Live Stock Sanitary Board, because of evidence of rabies existing among the dogs of Columbia County, has ordered all quarantined for a period of 90 days.

Dairyman Fined.—A dairyman at Mahanoy City, pleading guilty of using formaldehyd in milk, was recently fined $100 and costs amounting to $19.64; and a Locust Valley farmer for using ice in his milk was fined $62.50, including costs.

Philadelphia.

Phipps Institute.—The educational work of the Phipps Institute was opened on August 25 by Dr. Ward Brunton, one of the physicians of the institution, who gave to a lay audience a lecture on "The Cause and Prevention of Tuberculosis."

Public Playground.—The thirty-five playgrounds, mostly school yards, which have been open in different sections of the city during the summer under the auspices of the Board of Education, closed August 28. The total attendance for July was 158,646. This seems a practical contribution to the health of the children of the poor.

The New Filtering System.—Chief Hill of the filtration bureau has published a series of results of recently completed sand filters of the new system being installed. The results are the best ever attained by such methods. On August 8 the Schuylkill river water showed 42,000 bacteria per c.c.; one of the Lower Roxborough filters reduced the number to 12, while the poorest showing was 68 to the cubic centimeter. This filter system will be described in THE JOURNAL in the near future.

Reports of Contagious Diseases.—The Department of Public Health and Charities, to facilitate the report of contagious diseases, has sent to each physician postal cards properly printed for such reports. A circular letter accompanies the cards asking special aid of the profession in stamping out smallpox. To this end a request is made that all cases of chicken-pox be reported, and that especial influence be exerted toward having all persons vaccinated who are not so protected. The office of the bureau of health will hereafter be open night and day and never closed. In order to impress the public with the necessity of vaccination, the bureau is distributing a circular, citing a number of concrete examples of the manner in which vaccination protects. Among other examples cited, it is pointed out that of the 2,600 smallpox patients admitted to the Municipal Hospital within the last two years there was not one person who had been recently successfully vaccinated.

GENERAL.

Leprosy Scare in Porto Rico.—The people of this island are much alarmed over the discovery that fowls, produce and other articles were freely brought from the leper settlement to San Juan. The regulations of the settlement were said to be very lax.

The Reed Memorial Fund.—The committees appointed for the purpose by the American Medical Association, the American Association for the Advancement of Science, and the Congress of American Physicians and Surgeons met, August 15, in Bar Harbor, together with friends of the late Major Reed, M.D., U. S. A. Representative men were present from different parts of the country, and letters were received from various members of committees already appointed to promote the collection of a memorial fund in grateful commemoration of Dr. Reed's services in connection with yellow fever. Important suggestions were presented from President Eliot, Dr. W. W. Keen, Prof. J. W. Mallet and others. Dr. Daniel C. Gilman, chairman of a committee appointed by the American Association for the Advancement of Science, presided, and Dr. Stuart Paton acted as secretary. Among those who took part in the conference were Dr. W. H. Welch of Baltimore, Dr. Janeway of New York, Dr. Abbott of Philadelphia, Dr. Herter of New York, Dr. Barker of Chicago, Dr. Putnam of Buffalo, Dr. Fremont Smith of Bar Harbor and Dr. Sajous of Philadelphia, and beside these medical gentlemen, Bishop Lawrence of Massachusetts and Messrs. Morris K. Jesup, president of the New York Chamber of Commerce, John S. Kennedy, president of the Presbyterian Hospital of New York and William J. Schiffelin of New York. The following conclusions were reached: That an effort should be made to raise a memorial fund of $25,000 or more, the income to be given to the widow and daughter of Dr. Reed, and after their decease the principal to be appropriated either to the promotion of researches in Dr. Reed's special field, or to the erection of a memorial in his honor at Washington. Arrangements were made for the publication of circulars explaining this movement, and asking co-operation not only from the medical profession, but from all liberally disposed individuals who appreciate the value of Dr. Reed's services to mankind.

FOREIGN.

The Next International Dermatological Congress.—The fifth congress will meet in Berlin, Germany, September 13 to 17, 1904. The following subjects have been selected by the officers of the congress for discussion: "The Syphilitic Affections of the Circulatory Apparatus," "The Diseases of the Skin in Anomalies of Metabolism," and "Epitheliomas and Their Treatment." Dr. James Nevins Hyde, 100 State St., Chicago, has been appointed secretary for America.

The First German Total Abstinence Congress was opened, August 8, with simultaneous subsidiary societies of teachers, women, clergymen, etc. The Berlin correspondent of the *Muenchener Med. Woch.* notes that there are no special branches of total abstaining physicians, and rather offers his congratulations that the number of abstainers among German students is something hardly more than one-tenth of 1 per cent. Nevertheless he states that at the same time with the Total Abstinence Congress a general meeting of the world-wide Good Templars Order was held, which in Germany at the present time has some 625 lodges with almost 20,000 members and has in late years added nearly 4,000 to its membership.

LONDON LETTER.

Dinner to Mr. Jonathan Hutchison.

A complimentary dinner has been given to Mr. Jonathan Hutchinson on his seventy-fifth birthday by the members of the profession. Sir H. G. Howse, late president of the Royal College of Surgeons, presided, and covers were laid for 154 guests. In proposing the health of Mr. Hutchinson the chairman said that he was a professional of 53 years' standing, and the astonishing virility and vitality he had shown within the last two or three years was not an unfitting part of his career. Who among them, he asked, would, at the age of 73, undertake a long journey to South Africa in search of facts which might damn or support an hypothesis, and who would subsequently undertake a similar journey to India? Though the occasion was Mr. Hutchinson's 75h birthday, they still hoped to see more of his work, for he was still capable of studying facts which would be useful to the profession in the future. Sir Joseph Fayrer, who also spoke to the toast, remarked that he had always read Mr. Hutchinson's books with profit, and had learned to look on him with profound respect. What had struck him most was the energy with which Mr. Hutchinson had pursued his studies up to his 75th year with fidelity of conscience and with the true scientific spirit, always striving to ascertain what was right simply for the sake of right. Mr. Hutchinson, in response, referred to the healthy feeling and pride he felt in knowing that he had gained the esteem of so many influential friends. Such recognition helped him on in his work. This, of course, was not the highest motive, but though one should be actuated by high motives it was no harm to have them reinforced by lower ones. He thanked Sir Joseph Fayrer for mentioning fidelity to conscience. This he had been brought up in from his youth by the Society of Quakers, among whom the one dogma was conscience. Turning to the question of leprosy he related how, when visiting Robben Island (near Cape Town) he saw 500 persons confined for life because the medical profession were too indolent to pay proper attention to facts. Leprosy was not contagious, and yet on Robben Island were confined the children of white parents condemned to association with Kaffirs and Hottentots. Therein lay a motive for work in what remained to him of life—to render the profession alive to its duty with regard to leprosy. Poetry had always inspired him with motives for dry scientific work. He always tried to act up to the motto of the German poet, "Keep true to the dream of your youth." He also quoted with approval the view of a Swedish writer as to the distinction between fame and immortality. Fame consisted merely in having one's name known and diffused about, but immortality consisted in having one's work taken up and carried on by one's fellows, though one's name might be forgotten.

The Professorship of Surgery at the University of Cambridge.

Mr. Howard Marsh, surgeon to St. Bartholomew's Hospital, has been appointed professor of surgery in the University of Cambridge in succession to the late Sir G. M. H. Humphry, since whose death seven years ago the professorship has been suspended.

Correspondence.

Notes from Paris and Berck.

PARIS, August, 1903.

To the Editor:—Berck-sur-mer, a health resort on the Normandie coast, is best known outside of France through the work of Dr. L. Calot in the treatment of tuberculous and deformed children. On Dr. Calot's invitation the writer drove directly to his private hospital, a fine large building on the elevated drive facing the broad, sandy beach, where a fleet of some fifty dark fishing smacks was stranded. The hospital is managed by sisters of charity, and is very complete in all its appointments; the rooms are large, and most of them connect with balconies, where the patient can pass his time in the open air if unable to go to the beach. Most of the children, however, play on the beach; many who are unable to walk being carried out and placed on mattresses on carts. While much less use seems to be made of mechanical supports or of operative treatment than is the rule with us, the chubby appearance and ruddy faces of the children testified to the beneficial effects of this mode of life.

Dr. Calot begins his daily clinic at 4 p. m. in a spacious and well-appointed building connected with the hospital. There is a series of roomy offices and operating rooms and waiting rooms, affording every facility and convenience. A feature of the work is the injection treatment of tuberculous joints, glands, abscesses and sinuses. Cold abscesses are never opened; joints and glands are never excised, but are injected with iodoform-guaiac and camphorated naphthol every three or four days. The hips and spine, however, are not well suited to the injection treatment. Inflamed joints are immobilized in plaster splints, in which a window is cut for access to the joint, and if the case is acute the patient is kept recumbent. By these means combined with the sea air and sunshine many cases are cured without suppuration. Dr. Calot's method of forcible correction of the kyphotic spine was at one time very largely practiced, but is now used in a much milder form, even by its author. A corrective jacket was applied during suspension in the ordinary way and without anesthesia; the jacket, however, reached over the shoulders and included the neck, chin and occiput. While the plaster was hardening manual pressure was made over the kyphos. Afterward a large fenestra was cut in front and behind, the posterior opening being stuffed tightly with a large quantity of cotton, which was bandaged on. Dr. Calot believes that he is able in this way to exert a great deal of pressure on the kyphos without danger of a pressure sore. Dr. Calot has modified the technic of the replacement of congenital hip dislocation, by adding a strong inward rotation after the hip is reduced, either at the same sitting or a few days later, by which means he believes the head is forced more strongly and exactly into the acetabulum. His cases are all *x*-rayed in the operating room at the time of operation, and as in Liverpool and Paris. The finished plate is shown "while you wait." A long plaster spica is applied with the knee flexed, and the patient does not walk. In one case examined the patient was walking without support after five months' treatment, and by palpation, measurement and *x*-ray the reduction seemed perfect. As a rule treatment is over in five or six months. The writer left much impressed with Dr. Calot's kindness, earnestness and skill, and with the value of the open air and beach treatment of bone and joint tuberculosis.

In Paris the writer was so fortunate as to meet both Professor Kirmisson and Dr. Redard, both well known in America by their work and writings. Dr. Redard, who has just been distinguished by the red button of the officer of the legion of honor, devotes two mornings a week to the orthopedic service at the Furtado-Heine dispensary, a large, modern building in the Rue Delbet. Through Dr. Redard's extreme kindness, the writer was present at a private operation for manual replacement of a congenitally-dislocated hip in a rather thin girl of twelve. It was surprising to observe that the movements were made with great deliberation, with pauses between the different steps, and with no manipulation of the adductors, which readily yielded to the steady stretching, and in less than twenty minutes the hip was in place, without violence, bruising or injury. The ease and skill with which this was done were a revelation. It was noticed that during reposition the thigh was strongly flexed. The short spica is left off in five or six months.

Dr. Kirmisson, who occupies the chair of surgery of children in the University of Paris, spends several hours every morning at the fine new Hôpital Trousseau. He studies his cases very carefully, and impresses one by his good sense, moderation, and excellent judgment. He is opposed, as a rule, to the excision of joints in children, treats tuberculous abscesses and sinuses by the injection of iodoform-ether, and when there is acute disease keeps the patient in bed. Professor Kirmisson is not enthusiastic about tenoplasty in infantile paralysis, but thinks highly of arthrodesis. He spoke of the lack of careful reports of final results. In the manual replacement of congenital hip luxation, Professor Kirmisson lays great stress on reduction over the inferior border of the acetabulum, which he believes is much easier. It is effected by extreme flexion followed by external rotation, after the hip has been brought down and the resistance of the adductors overcome in the usual way.

After the work at the Trousseau, Professor Kirmisson goes each Wednesday to his ambulant clinic at the Hôtel Dieu, as he says, to observe the results of other methods of treatment. Curiously, on the day when the writer was present, three adults whose hips had been excised in childhood presented themselves. Everyone was horribly crippled, with a short, weak, deformed and nearly useless leg, and furnished a strong argument for Professor Kirmisson's conservatism. In answer to a question as to the use of passive movements in a sensitive joint, he said avoid all rough and violent movements, and if gentle movements are painful desist. "If you wish to ankylose a joint, hurt your patient." The writer feels under great obligation to Dr. Calot, Dr. Redard, Professor Kirmisson not only for their kindness and many personal attentions, but for the many valuable ideas he received from them.

HENRY LING TAYLOR.

Medical Contingent Fees.

CHICAGO, Aug. 26, 1903.

To the Editor:—In the August 22 issue of THE JOURNAL of the American Medical Association is an account of a damage case recently tried in a Colorado court which furnishes THE JOURNAL with an item for editorial comment under the heading "Medical Contingent Fees." It was admitted by the physicians for the plaintiff that the fees were contingent, that is, that they were to receive a certain percentage of the amount recovered for their services. The attorneys for the defendant corporation made the most of this admission and took the ground that it was contrary to good policy and morals. The physicians claimed that the transaction was an innocent one, that as the injured person was poor she was allowed to contract to pay her bill in this way.

Such a case as this brings up the whole vexed question of medical expert testimony, which furnishes such a fruitful theme for medical addresses and articles. Some few years ago the writer of this letter examined one of the yearly volumes of the *Index Medicus* and found 252 titles dealing with various phases of this problem.

The compensation of the medical expert witness is one of some difficulty. In certain states of the union it has been held that an expert, meaning by that one who gave open evidence and of necessity who had to specially qualify himself to

advise the court in such matters, was entitled to a fee commensurate with the time and effort necessary. Other courts have held, notably Illinois, that an expert medical witness could not refuse to testify because he had not been compensated. The courts in this state, in accordance with that of most states which have rendered decisions along this line, have held that while the physician or other expert could not refuse to testify providing he had an opinion, yet there was no way in which he could be compelled to form an opinion. He could not be made to examine facts nor to consult books nor, indeed, to set his mental machinery in operation so that he would have an opinion on a given set of facts. It will be seen that such a limitation of the decision practically makes it impossible to get expert testimony in our courts unless it is paid for. In almost every case to be of much value a physical examination of a patient must be made or there must be a careful study of a personal history or other matters, and this will not be undertaken by a physician unless it is with the understanding that he is to be compensated for the time that is required. Primarily it will be seen that all courts have recognized the necessity of opinion testimony and the fact that it requires time and effort to prepare it, and for this reason the one who gives it is entitled to a higher compensation than ordinary witness fees. Cases occasionally arise like that which is commented on by THE JOURNAL, in which a poor person is a litigant. It is probable that he can not pay his physician for the medical services, and if he is able to do that, there are many worthy litigants who would not be able to adequately compensate experts for going into court to properly present their case. It is manifestly optional with the physician whether he shall give a person credit for the amount of his fees. If he does so, and the person is very poor, it is evident that his compensation will depend on the fact of recovery. This is an unavoidable conclusion growing out of the nature of the transaction.

The chief objection against the method followed in the Colorado court is that the physicians agreed to take a certain percentage of the amount recovered. This is clearly bad practice; the amount of time required in preparing a case and in testifying is not greater where a large verdict is recovered than where a small one is obtained. The charge in all such cases should be for time, and should be based on the amount which the physician receives for similar service in which the fee is not contingent. If the amount of the fee is agreed on beforehand, there surely can be no objection if the physician chooses to wait for his fee. But to make the amount of the fee depend on the amount recovered, that gives the transaction the character that it ought not to have. On the other hand, to insist that every plaintiff should pay his expert witnesses for their services before they were allowed to testify would throw a burden on many worthy plaintiffs which in many instances would prevent their properly presenting their cases in court.

The whole subject of expert testimony in general and of medical expert testimony in particular is one that is sadly in need of revision. The enormous increase in personal injury litigation, the character of attorneys engaged in this class of work, and the kind of medical testimony which is frequently heard in our courts can not but lead to the view that some change in the near future will be necessary. Just what that change ought to be it is difficult to say. Of necessity there must be some statutory alteration, but these changes should be made with the utmost care, as any interference with the practice of our courts in a drastic manner is often more harmful than beneficial.

HAROLD N. MOYER, M.D.

The Alleged Cure for Lockjaw.

CHICAGO, Aug. 29, 1903.

To the Editor:—Through an error, I gave the wrong quantity of sodium chlorid in the formula which I used in the case of tetanus, described in THE JOURNAL, Aug. 29, 1903, page 566. The strength given is not dangerous, but is not advisable. The correct formula is:

℞. Sodii chloridi		3	656+
Sodii sulphatis		10	06+
Sodii citratis		3	364+
Calcii chloridi		0	136+
Aquæ		1000	00

The formula preceding this—the m/8, etc., formula—was correct.

S. A. MATTHEWS, M.D.

State Boards of Registration.

Indiana Examination Questions.—The following were the questions used for the examination of candidates to practice medicine at the semi-annual examination of the Indiana State Board of Medical Registration and Examination, at Indianapolis, July 14 to 16, 1903, as furnished by Dr. W. T. Gott, Crawfordsville, secretary.

ANATOMY.

1. Describe the palmar fascia. 2. Give the origin, course and distribution of the internal iliac artery. 3. Give the names of the muscles of the palmar region. 4. Describe an artery. 5. Give the relation of the ureters to the pelvic organs in the female. 6. What abdominal viscera has ligamentous attachment to the diaphragm, and give the names and location of the ligaments? 7. Give the names and a description of the lobes of the lungs. 8. Describe the ligaments of the uterus. 9. At what situation can the subclavian artery be compressed from the surface? Give the anatomic relations that make this possible. 10. Name the muscles of the larynx.

PHYSIOLOGY.

1. Describe the pulmonic circulation. 2. Define (*a*) anastomosis, (*b*) metabolism, (*c*) anabolism, (*d*) catabolism. 3. What is the composition of the chyle? 4. Describe the lymphatic circulation. 5. What is the normal amount of urine voided by an adult in twenty-four hours, and what physiologic conditions cause a variation from this amount? 6. How would you proceed to make a blood count? 7. What are the five chief functions of the stomach? 8. Describe the nerve control of the urinary bladder. 9. What are the chief factors concerned in stimulating the secretion of gastric juice? 10. How would you make a quantitative analysis of the gastric juice?

OBSTETRICS.

1. Give causes, symptoms and treatment of inversion of the uterus. 2. Name one or more causes of hour-glass contraction of the uterus. Give treatment. 3. State most common cause of morbid retention of the placenta. 4. When should cesarean section be performed? 5. Give probable cause and treatment of puerperal mania. 6. Give treatment of puerperal septicemia. 7. Describe the kyphotic pelvis. 8. How long should the mother keep her bed after labor? 9. Describe Sylvester's method of artificial respiration. 10. State best method of inducing premature labor when it is designed to save the child's life.

GYNECOLOGY.

1. Name the physiologic periods of woman. 2. Give the principal procedures in local treatment. 3. Give preparation for aseptic abdominal operation, (*a*) preparation of the operator and assistants, (*b*) preparation of the instruments, etc., (*c*) preparation of the patient. 4. Define hypodermoclysis, giving technic of operation. 5. Give etiology, pathology, diagnosis and treatment of acute metritis. 6. Give indications for curettage and describe operation. 7. Give indications for hysterectomy and describe operation. 8. Give differentiations of tubercular and gonorrheal cystitis. 9. Give differentiation of renal and ovarian cysts. 10. Give diagnosis and operation for urethrovaginal fistula.

MATERIA MEDICA AND THERAPEUTICS (REGULAR).

1. Name the route by which medicinal agents may be introduced into the organism. 2. Name a medicinal agent which (*a*) raises blood pressure, (*b*) lowers it, and give the physiologic action of each. 3. Name a medicinal agent which increases the renal function, and give an indication for its use. 4. Name a medicinal agent which increases the function of the skin, and give an indication for its use. 5. Define (*a*) decoction, and (*b*) infusion. 6. Give the derivation of quinin and its therapy. 7. How does ergot arrest uterine hemorrhage? 8. Write a prescription for an expectorant suitable for the first stage of acute bronchitis. 9. Write a prescription for a general tonic. 10. Write a prescription for an emetic.

MATERIA MEDICA AND THERAPEUTICS (ECLECTIC).

1. Name two therapeutic remedies, one of which will contract the pupil and the other dilate it. 2. Give indications when you would give the following remedies, stating dose of each: Asclepias; 3, oenantha; 4, solanum car; 5, hydrastis; 6, cuprum; 7, colocynth; 8, apocynum. 9. Give indications for an acid—an alkali. 10. Write a prescription for an irritative cough, such as is often found associated with measles.

MATERIA MEDICA AND THERAPEUTICS (HOMEOPATHIC).

1. Chloroform—give therapeutic action. 2. Chimaphila umbellata—give habitat and indications for use. 3. Chelidonium—name three special centers of action. 4. Carbo-vegetabili—give therapeutic individuality. 5. Capsicum annuum—give therapeutic individuality. 6. Cantharides—name special centers of action. 7. Cannabic sativa—give anecdote and special centers of action. 8. Bryonia alba—give therapeutic individuality. 9. Pharmacology—define. 10. Kali bichromicum—give effects on mucous membranes.

THEORY AND PRACTICE OF MEDICINE (REGULAR).

1. Give predisposing cause, pathology, symptoms and prognosis of arterioscierosis of the cerebral arteries. 2. Give predisposing cause and symptoms of cerebral hemorrhage. 3. Give exciting

cause and physical signs of croupous pneumonia. 4. Give predisposing cause and treatment of pulmonary hemorrhage. 5. Give physical signs of pleuritic effusion. 6. Give exciting cause, symptoms and treatment of typhoid fever. 7. Give common cause, symptoms and treatment of gastrointestinal catarrh in infants. 8. Give exciting cause, symptoms and pathology of epidemic cerebrospinal meningitis. 9. Give pathology and diagnosis of Bright's disease of the kidneys. 10. Give diagnosis and treatment of cystitis.

THEORY AND PRACTICE OF MEDICINE (ECLECTIC).

1. Give diagnosis, complications and sequela of scarlatina. 2. Give etiology, pathology and treatment of pericarditis. 3. Give treatment of a child 2 years old who has taken one-half grain morphia sulphas. 4. Give treatment of chronic tonsillitis and adenoids of the pharynx. 5. Give etiology, diagnosis and treatment of Addison's disease. 6. Give treatment for la grippe. 7. Give causes and treatment for chorea. 8. How would you treat a case of arsenical poisoning? 9. Give pathology and diagnosis of mitral stenosis. 10. Give cause and treatment for uremic poisoning.

THEORY AND PRACTICE OF MEDICINE (HOMEOPATHIC).

1. Define Hodgkin's disease. 2. Give diagnosis and morbid anatomy of diabetes mellitus. 3. Give etiology and diagnosis of nephritis. 4. (*a*) What is an aneurism? (*b*) Give the physical signs of aneurism of the aorta. 5. Give symptoms and treatment of arteriosclerosis. 6. Define and give treatment of enuresis. 7. State common cause and treatment of endocarditis. 8. Define hydro- and pneumo-thorax. 9. Describe chronic interstitial pneumonia. 10. Give cause and morbid anatomy of cirrhosis of the liver.

CHEMISTRY.

1. What is the usual reaction of normal urine, and to what is it due? 2. Give two reliable tests for albuminuria. 3. Give the antidotes for carbolic acid poison. 4. What elements are found in all animal and vegetable substances? 5. What is the chemical antidote for arsenical poison? 6. If you were called to see a patient who had taken a large dose of tincture of iodin what chemical antidote would you give? 7. What is an oxidizing agent? Name three. 8. What is a reducing agent? Name two. 9. What is urea chemically? What is the average daily amount excreted in the urine? 10. Define a ptomain.

SURGERY.

1. Classify dislocation of the hip joint. 2. Give the indications for surgical intervention in gastric ulcer. 3. Give differential diagnosis between a sarcoma and gumma of the testicle. 4. Give the signs and symptoms of a fracture of the shaft of a long bone. 5. Differentiate between obstruction to the common bile duct by a gallstone and by a carcinoma of the head of the pancreas. 6. Give method of reduction of subcoracoid dislocation of the shoulder joint. 7. Give indications for trephining in fractures of the skull. 8. Give differential diagnosis between mechanical ileus and acute general peritonitis. 9. Briefly describe the treatment of strangulated hernia. 10. Give the immediate treatment for acute retention of urine from an enlarged prostate.

PATHOLOGY.

1. Describe the macroscopic and microscopic appearance of the kidney in interstitial nephritis. 2. Describe an aneurism. What condition is essential for the development of an aneurism? 3. Define (*a*) telangiectasis, (*b*) edema, (*c*) necrosis, (*d*) gangrene. 4. What is the pathology of locomotor ataxia? 5. Describe three kinds of crystals found in the urine. Under what conditions are these present?

BACTERIOLOGY.

1. How would you pasteurize milk? Why is the process repeated three times? 2. Give a method of differentiation between the tubercle and smegma bacilli. 3. How would you thoroughly disinfect your hands? 4. How would you test the blood for Widal's reaction? 5. How is it conclusively demonstrated that a certain microbe is the cause of a certain disease?

HYGIENE.

1. Define hygiene. 2. What hygienic measures are most efficient in the prevention and treatment of pulmonary tuberculosis? 3. What hygienic measures are essential to the prevention of typhoid fever? 4. What hygienic measures are essential to the prevention of gastrointestinal catarrh in children? 5. Describe the proper hygiene of the sick room?

HISTOLOGY.

1. Define histology. 2. Give histology of muscle. 3. Give histology of an artery. 4. Give histology of the skin. 5. Give histology of a pulmonary air cell.

RHINOLOGY.

1. What are the causes of fetid discharge from the nose? 2. Name the congenital deformities of the nose? 3. Mention the forms of rhinitis. 4. Give the treatment of epistaxis. 5. Give the treatment of acute coryza.

MEDICAL JURISPRUDENCE.

1. How would you distinguish between an incised wound made before and after death? 2. Define (*a*) expert witness, (*b*) ordinary witness. 3. Define rigor mortis. To what is it due? 4. What organ is generally the first to undergo putrefaction? 5. What organ is generally the last to undergo putrefaction?

OPHTHALMOLOGY.

1. How would you test acuteness of vision? 2. Give test for color blindness. 3. Define conjunctivitis neonatorum; give causes, symptoms and treatment. 4. Define iridectomy, and state under what conditions you consider the operation necessary. 5. When should enucleation be performed? Describe operation.

OTOLOGY.

1. Give topography of the sound-conducting apparatus. 2. Give method of examination of the middle ear. 3. Give etiology, diagnosis and treatment of mycosis of the external ear. 4. Give diagnosis and treatment of strictures of eustachian tube. 5. Otosclerosis—give etiology, diagnosis and treatment.

LARYNGOLOGY.

1. Give the physiology of the larynx. 2. Give the differential diagnosis of syphilitic laryngitis. 3. Give symptoms and treatment of elongated uvula. 4. Give treatment of neoplasms, of the cavity of larynx. 5. Describe edema of the larynx and give proper treatment.

DERMATOLOGY.

1. Define tinea favosa; give synonym and treatment. 2. Describe scabies and give treatment. 3. What is epithelioma? 4. Give diagnosis of lupus erythematosus. 5. Give the etiology of lichen ruber.

Maine Report.—Dr. A. P. K. Meserve, secretary of the Maine Board of Registration of Medicine, reports that at the examination held at Portland, July 8 and 9, the number of subjects examined in was 14; total questions, 106; percentage required to pass, 75; 48 applicants were examined, all of whom passed. There was also one licensed by reciprocity with New Jersey, without examination. The examination was partly oral and partly written.

PASSED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
515	R.	Medical School of Maine	1903	89.3
521	R.	Medical School of Maine	1903	88 5-7
522	R.	Medical School of Maine	1903	82 5-7
523	R.	Medical School of Maine	1903	84
525	R.	Medical School of Maine	1903	87 1-7
526	R.	Medical School of Maine	1903	92 5-7
527	R.	Medical School of Maine	1903	87
530	R.	Medical School of Maine	1903	89.8
535	R.	Medical School of Maine	1903	89.5
536	R.	Medical School of Maine	1903	88.6
539	R.	Medical School of Maine	1903	95 6-7
543	R.	Medical School of Maine	1903	88 6-7
545	R.	Medical School of Maine	1903	89 4-7
547	R.	Medical School of Maine	1903	91
549	R.	Medical School of Maine	1903	92 6-7
552	R.	Medical School of Maine	1903	93.6
554	R.	Medical School of Maine	1903	93 1-7
555	R.	Medical School of Maine	1903	90 1-7
558	R.	Medical School of Maine	1903	94 5-7
559	R.	Medical School of Maine	1903	96 1-7
516	R.	McGill University, Montreal	1903	87.2
538	R.	McGill University, Montreal	1901	87 5-7
551	R.	McGill University, Montreal	1902	93 2-7
517	R.	Coll. of Phys. and Surgs., New York	1886	90 1-7
533	R.	Coll. of Phys. and Surgs., Baltimore	1903	87 5-7
557	R.	College of Phys. and Surgs., Boston	1902	77
561	R.	College of Phys. and Surgs., Boston	1903	86 2-7
518	R.	Bellevue Hosp. Med. Coll., New York	1897	94 4-7
519	R.	Medical Dept., University of Vermont	1888	86 2-7
520	R.	Harvard University Medical School	1877	86.6
528	R.	Harvard University Medical School	1901	92 5-7
542	R.	Harvard University Medical School	1902	97
548	R.	Harvard University Medical School	1899	91 3-7
550	R.	Harvard University Medical School	1903	90
524	R.	Laval University, Montreal	1902	86 6-7
...	R.	Laval University, Montreal	1901	*
539	R.	Jefferson Med. College, Philadelphia	1902	87 1-2
556	R.	Jefferson Med. College, Philadelphia	1902	90.7
532	R.	Maryland Medical College, Baltimore	1903	90 6-7
537	R.	Maryland Medical College, Baltimore	1903	78.5
534	R.	Baltimore Medical College	1903	93.9
553	R.	Baltimore Medical College	1902	83
544	R.	Baltimore Univ. School of Medicine	1903	83 6-7
540	R.	Vanderbilt University, Tennessee	1903	80
541	R.	Johns Hopkins Med. Coll., Baltimore	1903	94 6-7
546	R.	Dartmouth Medical School	1888	75
560	R.	Univ. of the South, Sewanee, Tenn.	1901	89.5
529	H.	Hahnemann Med. Coll., Philadelphia	1892	86 6-7

* Oral examination only.

Wisconsin Report.—Dr. Filip A. Forsbeck, Milwaukee, secretary of the Wisconsin Board of Medical Examiners, reports the examination held at Madison, July 14 to 16, as follows: Subjects, 18; total questions, 110; percentage required to pass, 75, and not below 60 per cent. in more than one branch; written examination; total number examined, 53; passed, 43; failed, 10.

PASSED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
225	R.	Detroit College of Medicine	1903	87.3
226	R.	U. of Bishops' College, Montreal	1903	82.7
227	R.	University of Minnesota	1903	87.1
270	R.	University of Minnesota	1902	82.6
228	R.	Coll. of P. and S., Univ. of Illinois	1903	84.4
231	R.	Coll. of P. and S., Univ. of Illinois	1903	80.8
232	R.	Coll. of P. and S., Univ. of Illinois	1903	89.1
233	R.	Coll. of P. and S., Univ. of Illinois	1903	84
234	R.	Coll. of P. and S., Univ. of Illinois	1903	90.1
244	R.	Coll. of P. and S., Univ. of Illinois	1903	90.7
253	R.	Coll. of P. and S., Univ. of Illinois	1903	84
258	R.	Coll. of P. and S., Univ. of Illinois	1903	83.8
259	R.	Coll. of P. and S., Univ. of Illinois	1902	81.7
263	R.	Coll. of P. and S., Univ. of Illinois	1903	89.2
265	R.	Coll. of P. and S., Univ. of Illinois	1903	89.2
269	R.	Coll. of P. and S., Univ. of Illinois	1903	87
230	E.	Bennett Medical College, Chicago	1902	80.3
235	R.	Rush Medical College	1903	76.3
236	R.	Rush Medical College	1903	85.7

PASSED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
237	R.	Rush Medical College	1893	89.5
245	R.	Rush Medical College	1903	87.5
246	R.	Rush Medical College	1903	87.6
247	R.	Rush Medical College	1903	84
249	R.	Rush Medical College	1903	85
250	R.	Rush Medical College	1903	87.6
272	R.	Rush Medical College	1903	79.9
273	R.	Rush Medical College	1903	84.9
274	R.	Rush Medical College	1903	85.6
238	R.	Jefferson Medical College	1902	78.1
262	R.	Jefferson Medical College	1903	88.4
239	R.	Johns Hopkins Medical School	1903	91.9
240	R.	Johns Hopkins Medical School	1903	92
241	R.	Northwestern Univ. Medical School	1902	92.2
248	R.	Northwestern Univ. Medical School	1903	92.3
251	R.	Northwestern Univ. Medical School	1903	85.5
252	R.	Northwestern Univ. Medical School	1903	86.2
266	R.	Northwestern Univ. Medical School	1903	86.6
268	R.	Northwestern Univ. Medical School	1903	75
243	H.	Hering Medical College	1903	85.7
256	O.	American School of Osteopathy	1903	83.5
257	O.	American School of Osteopathy	1903	83.2
267	H.	Chicago Homeopathic Medical College	1903	79.5
279	R.	Chicago Medical College	1877	75

FAILED.

229	E.	Bennett Medical College	1903	*78.2
242	H.	Hahnemann Medical College, Chicago	1903	72
260	O.	Still College of Osteopathy	1903	*77.4
261	O.	Still College of Osteopathy	1903	72.1
277	O.	Still College of Osteopathy	1903	66
278	O.	Still College of Osteopathy	1903	63.2
264	R.	Northwestern Univ. Medical School	1903	75.9
276	R.	Detroit College of Medicine	1903	67.5
255	R.	Harvey Medical College	1901	58
271	R.	Illinois Medical College	1902	70.3

* Conditioned.

Indiana Report.—The Indiana Board of Medical Registration and Examination reports the examination held at Indianapolis, July 14 to 16, 1903, as follows: Number of subjects examined in, 18; total number of questions, 130; percentage required to pass, 75, and not less than 40 per cent. in any branch and not less than 50 per cent. in two subjects; written examination; total number examined, 106; number passed, 91; failed, 15.

PASSED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
56	R.	Hospital Coll. of Medicine, Louisville	1903	85
75	R.	Hospital Coll. of Medicine, Louisville	1903	78.1
77	R.	Hospital College of Med., Louisville	1903	77.8
78	R.	Hospital College of Med., Louisville	1903	89.1
80	R.	Hospital College of Med., Louisville	1903	87.3
81	R.	Hospital College of Med., Louisville	1903	86.3
92	R.	Hospital College of Med., Louisville	1903	87.2
93	R.	Hospital College of Med., Louisville	1903	85.3
57	R.	Coll. of Phys. and Surgs., Baltimore	1892	81
68	R.	College of Phys. and Surgs., Chicago	1902	89.4
72	R.	College of Phys. and Surgs., Chicago	1903	86
73	R.	College of Phys. and Surgs., Chicago	1903	85.6
152	R.	College of Phys. and Surgs., Chicago	1903	84.9
91	R.	College of Phys. and Surgs., St. Louis	1903	82.4
104	R.	College of Phys. and Surgs., St. Louis	1903	85.3
160	R.	College of Phys. and Surgs., Keokuk	1885	†76.4
58	R.	Louisville Medical College	1903	81.6
113	R.	Louisville Medical College	1903	86.1
114	R.	Louisville Medical College	1903	80.7
116	R.	Rush Medical College	1880	78.1
123	R.	Rush Medical College	1903	93.4
126	R.	Rush Medical College	1903	89.9
129	R.	Rush Medical College	1903	90
130	R.	Rush Medical College	1903	91.7
135	R.	Rush Medical College	1903	97.5
136	R.	Rush Medical College	1899	94
61	R.	Medical College of Ohio, Cincinnati	1903	86.3
62	R.	Medical College of Ohio, Cincinnati	1903	88.3
70	R.	Medical College of Ohio, Cincinnati	1903	80.3
120	R.	Medical College of Ohio, Cincinnati	1902	76.7
150	R.	Medical College of Ohio, Cincinnati	1903	81.6
131	R.	Medical College of Indiana	1903	78.5
133	R.	Medical College of Indiana	1903	85
134	R.	Medical College of Indiana	1903	83
63	R.	Washington University, St. Louis	1901	87.2
64	R.	University and Bellevue Hospital Medical College, New York	1903	87
74	R.	University of Kentucky	1903	85.6
85	R.	University of Kentucky	1903	80.8
88	R.	University of Kentucky	1903	82.7
89	R.	University of Kentucky	1903	89.7
140	R.	University of Kentucky	1903	80.6
145	R.	University of Louisville	1903	83.6
146	R.	University of Louisville	1903	87.3
147	R.	University of Louisville	1903	83.7
65	H.	Dunham Medical College, Chicago	1901	85.4
66	H.	Chicago Homeopathic Medical College	1894	84.8
69	R.	Long Island College Hospital	1888	91.5
71	R.	Kentucky School of Medicine	1903	82.1
97	R.	Kentucky School of Medicine	1903	86.4
98	R.	Kentucky School of Medicine	1903	83.2
99	R.	Kentucky School of Medicine	1903	84.8
100	R.	Kentucky School of Medicine	1903	86.2
101	R.	Kentucky School of Medicine	1903	87.8
102	R.	Kentucky School of Medicine	1903	82
105	R.	Kentucky School of Medicine	1903	80.7
108	R.	Kentucky School of Medicine	1903	86.1

PASSED.

Candidate.	Schl. of Pract.	College.	Year Grad.	Per Cent.
112	R.	Kentucky School of Medicine	1903	82.3
141	R.	Kentucky School of Medicine	1903	85
76	H.	Hering Medical College, Chicago	1903	80.5
82	E.	Eclectic Medical Institute, Cincinnati	1903	80.7
83	E.	Eclectic Medical Institute, Cincinnati	1903	84.5
154	E.	Eclectic Medical Institute, Cincinnati	1903	82.8
155	E.	Eclectic Medical Institute, Cincinnati	1903	84.7
90	R.	Miami Medical College	1903	76.6
94	H.	Homeo. Med. Coll. of Mo., St. Louis	1903	80.8
95	H.	Homeo. Med. Coll. of Mo., St. Louis	1903	82.7
96	R.	Jefferson Medical College	1902	86.1
153	R.	Jefferson Medical College	1903	87.1
156	R.	Jefferson Medical College	1903	87.5
107	R.	Barnes Medical College	1903	83.5
111	R.	Grand Rapids Medical College	1903	89.2
118	R.	Harvey Medical College	1903	85.6
119	O.	American School of Osteo., Kirksville	1903	77
122	R.	Laura Memorial Med. Coll., Cincinnati	1902	84.5
124	H.	Cleveland Univ. of Med. and Surg.	1897	89.6
125	H.	Hahnemann Medical College, Chicago	1903	87.6
144	H.	Hahnemann Med. Coll., Philadelphia	1903	87.3
127	R.	Baltimore Medical College	1903	86.9
128	R.	Baltimore Medical College	1903	88
132	R.	Ohio Medical University, Columbus	1903	81.6
161	R.	Ohio Medical University	1897	†77.4
137	H.	Pulte Medical College	1888	79.4
138	R.	Columbian Univ., Washington, D. C.	1901	86.6
139	R.	University Med. College, Kansas City	1903	82.5
142	E.	Bennett Medical College, Chicago	1903	91.2
143	E.	Bennett Medical College, Chicago	1903	89.2
148	R.	Tulane University, New Orleans	1903	88.5
149	R.	Detroit College of Medicine	1893	83.7
151	R.	Marion-Sims-Beaumont Medical College, St. Louis	1903	76.9
157	R.	Medico-Chirurgical Coll., Philadelphia	1902	84
159	R.	Cincinnati College of Med. and Surgery	1890	‡75.4

FAILED.

59	E.	American College of Medicine, Chicago	1903	*
60	R.	College of Phys. and Surgs., Keokuk	1887	*
67	O.	Central Institute, Chicago	1903	*
79	R.	Central Coll. of P. and S., Indianapolis	1903	79.3
84	R.	Kentucky School of Med., Louisville	1902	†77.6
110	R.	Kentucky School of Med., Louisville	1902	†76
158	R.	Kentucky School of Med., Louisville	1901	†74.6
86	E.	Eclectic Medical Institute, Cincinnati	1903	74.2
87	E.	Eclectic Medical Institute, Cincinnati	1903	76.5
103	E.	Eclectic Medical College, Indianapolis	1903	72
106	R.	Columbus Medical College	1882	63.6
109	R.	Louisville Medical College	1903	73
115	R.	Louisville Medical College	1901	†75.9
117	R.	University of Louisville	1903	73.5
121	O.	Am. School of Osteopathy, Kirksville	1902	72.4

EXPLANATIONS.—O. Osteopath. * Did not complete examination. † Second examination. ‡ Third examination.

Marriages.

S. WILSON DODGE, M.D., mayor of Fairbury, Neb., to Miss Giles.

HENRY W. WALKER, M.D., to Miss Claire Johnson of Macon, Ga., August 19.

CHARLES C. CONSER, M.D., to Miss Emily L. Baker, both of Baltimore, August 20.

EMMA L. SCHOLZ, M.D., to F. H. Aldrich, M.D., both of Belview, Minn., at Waukegan, Ill., August 18.

RICHARD ARNETT WILLIAMS, M.D., Knoxville, Tenn., to Miss Cora Ella Morgan of Memphis, Tenn., August 25.

JOSEPH V. LONGFELLOW, M.D., Urbana, Ohio, to Mrs. Vilette Ward Hopkins of Rawlins, Wyo., at Cincinnati, August 24.

Deaths.

Phenett Coe Barker, M.D. College of Physicians and Surgeons, New York, 1860, ex-president of the Medical Society of the State of New Jersey, and of the Morristown (N. J.) Board of Health; founder and medical director of the Morristown Memorial Hospital and dean of the local medical profession, died at his home, August 21, from angina pectoris, after an illness of two days, aged 68.

John Hyde, M.D. Hahnemann Medical College, Philadelphia, 1840, formerly a member of the Texas Rangers and a surgeon in both the Mexican and Civil wars, died from "senile debility," after an illness of two years, August 20, at his home in Terre Haute, Ind., aged 77. He retired from active practice about twenty years ago.

William A. Boyce, M.D. Medical College of Virginia, Richmond, 1903, of Kelford, N. C., died at the Protestant Hospital, Norfolk, Va., at which he was an interne, August 5, after an

illness of one week, from septicemia due to infection of a thumb while dressing a wound, aged 25.

Charles F. Hildreth, M.D. Harvard University Medical School, Boston, formerly surgeon at the New Hampshire State Prison, Concord, and surgeon both in the Army and Navy during the Civil War, died at Manchester, N. H., August 18, from diabetes, aged 71.

Horatio F. Mintern, M.D. Arkansas University, Little Rock, 1899, a member of the Arkansas Medical Society, and the Little Rock Medical Society, died at his home in Pendleton, Ark., August 15, from malaria fever, after an illness of several weeks.

Ira Ellis **Caspar Wister Smith, M.D.** Atlanta (Ga.) Medical College, 1866, died at his home in Palmetto, Ga., August 17, after an illness of several months, aged 61. He represented his county in the state legislature for several terms.

Allen R. Thompson, M.D. Albany (N. Y.) Medical College, 1899, of Troy, N. Y., while suffering from melancholia due to a long illness, committed suicide by cutting his throat at Edgemere Inn, Asbury Park, N. J., August 22, aged 48.

Jonas Deisinger, M.D. University of Pennsylvania, Philadelphia, 1867, died at his home in York, Pa., August 13, from cancer of the face, after an illness of six years, aged 70. He was a member of the York County Medical Society.

Albert H. Brown, M.D. Jefferson Medical College, Philadelphia, 1903, interne at the Home Hospital, Augusta, Me., died at the City Hospital, Augusta, August 13, from tubercular meningitis, after an illness of two weeks, aged 23.

John M. Evans, M.D. Indiana Medical College, La Porte, Ind., 1846, founder and first mayor of Evansville, Wis., and at one time a member of the state legislature, died at his home in Evansville, August 23, aged 83.

Ephraim Bateman, M.D. Jefferson Medical College, Philadelphia, 1851, the oldest physician in Cumberland County, died at his home in Cedarville, N. J., August 20, from paralysis, after a long illness, aged 73.

Newton C. Harris, M.D. Albany (N. Y.) Medical College, 1857, assistant surgeon in the 155th New York Volunteer Infantry in the Civil War, died at his home in Schuylerville, N. Y., August 6, aged 70.

Samuel W. Skinner, M.D. Yale University, New Haven, Conn., 1846, surgeon and breveted colonel for meritorious service during the Civil War, died at his home in Toledo, Ohio, August 16, aged 83.

Washington West, M.D. McDowell Medical College, St. Louis, 1866, for two years a surgeon in the Navy, and afterward a resident of St. Louis, died from apoplexy after an illness of six days, aged 73.

Richard E. Brown, M.D. Jefferson Medical College, Philadelphia, 1863, a surgeon in the Army during the Civil War, died at his home in Mount Holly, N. J., August 7, from heart disease, aged 63.

Michael F. McGrath, M.D. College of Physicians and Surgeons, New York, died from consumption at the home of his brother in Fishkill Landing, N. Y., August 11, after a long illness, aged 35.

Stephen W. Seaman, M.D. Medico-Chirurgical College of Philadelphia, 1899, died at his home in Lenhartsville, Pa., August 11, from peritonitis, after an illness of one week, aged 28.

Emma Virginia Morton Baker, M.D. Woman's Medical College, Philadelphia, for ten years assistant physician at the Maine Insane Hospital, Augusta, died recently from paralysis, aged 50.

John Gleises, M.D. Bellevue Hospital Medical College, New York, 1877, of New York City, died at his summer home Brookside, near Saratoga, from "dropsy," August 14, aged 50.

J. A. Lovett, M.D. Central College of Physicians and Surgeons, Indianapolis, 1880, died from tuberculosis at his home in Goodland, Ind., after a lingering illness, August 4, aged 64.

Nathaniel L. Bunce, M.D. Cleveland Medical College, 1851, a pioneer practitioner of Marshalltown, Iowa, died at the home of his niece in Los Angeles, Cal., August 11, aged 74.

James Curry Ford, M.D. University of Louisville, 1878, died at his home in New York City from cancer of the throat, August 22, after an illness of nine months, aged 68.

John Henry Martin, M.D. University of Maryland, Baltimore, 1862, who practiced in Baltimore until a year ago, died at his home near Aberdeen, Md., August 20, aged 69.

John Irwin Arrington, M.D. University of Nashville, Tenn., 1863, died at his home in Nashville, August 19, aged 69. He retired from active practice two years ago.

Samuel O. Bryan, M.D. Louisville Medical College, died at his home near Mooleyville, Ky., August 2, from typhoid fever, after an illness of two weeks, aged 44.

Benjamin H. Howlett, M.D. College of Physicians and Surgeons, Baltimore, 1878, died at his home in Brogueville, Pa., August 14, after a long illness, aged 56.

William Z. Morgan, M.D. Kentucky School of Medicine, Louisville, 1892, died at his home in Princeton, Ky., August 17, from paralysis, after a long illness.

William P. Sharkey, M.D. Hahnemann Medical College, Philadelphia, 1875, died suddenly from heart disease at his home in Philadelphia, August 18, aged 62.

William H. Jett, M.D. University of Louisville, 1862, surgeon in the Federal Army, died suddenly at his home in Munfordville, Ky., August 17, aged 66.

P. W. Fox, M.D. Tennessee Medical College, Knoxville, 1895, died at his home near Beaver Ridge, Tenn., August 18, after an operation for appendicitis.

Hartwell C. Tompkins, M.D. University of Vermont, Burlington, died at his home in Knowlesville, N. Y., August 5, after a short illness, aged 75.

Thomas L. Phillips, M.D. Georgia College of Eclectic Medicine and Surgery, 1891, formerly of Atlanta, Ga., died at Springfield, Utah, August 13.

C. W. Miles, M.D. Bolingbroke, Ga., died at the home of his father in Griffin, Ga., August 15, from typhoid fever, after an illness of five weeks, aged 24.

James McGarry, M.D. McGill University, Montreal, 1858, died at his home in Niagara Falls, South, Ont., August 13, from gangrene of the leg, aged 69.

Richard C. Johnson, M.D. University of Louisville, 1884, died at his home in Morganfield, Ky., July 28, from dysentery, after an illness of ten days.

John W. St. Clair, M.D. Miami Medical College, Cincinnati, died at his home in Milton, Ind., August 13, after several months' illness, aged 61.

Charles E. Pierce, M.D. Eclectic Medical Institute, Cincinnati, 1878, died suddenly from heart disease at his home in Little Rock, August 19.

James E. Brown, M.D. Memphis (Tenn.) Medical College, 1858, died at his home in McKenzie, Tenn., August 13, from heart disease, aged 68.

George Ewing Connell, M.D. Howard University, Washington, D. C., 1879, died at his home in Irwin, Va., July 28, after a long illness, aged about 60.

Furman W. Runyan, M.D. Atlanta Medical College, 1887, died at his home in Austell, Ga., August 12, from uremia, after a short illness.

William H. Poindexter, M.D. University of Nashville, 1860, died from paralysis at his home in Bells, Tenn., August 17, after a long illness.

Arthur R. Barry, M.D. University of Georgetown, Washington, D. C., 1861, died at his home in Weatherford, Texas, August 4, aged 64.

Ernst Roesel, M.D. Missouri Medical College, St. Louis, 1887, died suddenly from heart disease at his home in Pequot, Minn., August 5.

Charles F. Baker, M.D., of Rawson, Ohio, died at his home in that place, July 26, from tuberculosis, after a long illness, aged 35.

John Harrington Vandiver, Jefferson Medical College, Philadelphia, 1845, died at his home in Talladega, Ala., August 17, aged 86.

John Denison Kenyon, M.D. Albany (N. Y.) Medical College, 1857, died suddenly at his home in Westerly, R. I., August 12, aged 69.

J. N. Barnett, M.D. University of Louisiana, New Orleans, 1857, died at his home in Little Rock, Ark., August 14, aged 69.

John Hursey Pool, M.D. University of Pennsylvania, Philadelphia, 1859, died at his home in South Mills, N. C., July 29.

Humphrey G. Hendrick, M.D., of Talladega, Ala., died at the home of his brother in Eureka, Ala., August 11, aged 78.

Robert J. Dearborn, M.D. College of Physicians and Surgeons, Chicago, died at his home in Morrisonville, late in July.

Andrew J. Hartman, M.D. University of Louisville, 1881, died at his home in Myers, Tenn., August 4, aged 55.

Mary K. Gale Warren, M.D. Boston University School of Medicine, 1877, died at her home in Boston, July 31.

August Trafton, M.D., 1876, died at his home in Dixon, Cal., August 15, after an illness of six weeks, aged 78.

Gotthold Pape, M.D. New York University, 1880, died, August 1, at his home in Hoboken, N. J., aged 61.

George T. Cauthorn, M.D., died at his home in Bedford City, Va., August 8, after a long period of invalidism.

Deaths Abroad.

Emma Constance Stone-Jones, L.S.A. London 1889; M.B., C.M., Trinity College, Toronto, died recently at Melbourne, Victoria, Australia, aged 46. She is said to have been the first qualified woman practitioner in Australasia.

Dr. Karl Hofmann, professor of physiology and anatomy at Leyden, aged 62.—**Dr. Ladreit de Lacharriere** of Paris, founder of the *Annales des maladies de l'oreille et du larynx*, and honorary chief of the National Institute for Deaf Mutes. ——**Dr. Chalot,** professor of surgery at Toulouse.——**Dr. Jean Roger,** inspector general of the conseil sanitaire maritime et quarantenaire in Egypt.

Carl Maydl, M.D., professor of surgery at Prague, died at his country seat, August 12, from the effects of heart disease, aged 50. Maydl commenced his career as assistant to E. Albert and accompanied the latter from Innsbruck to Vienna. His monographs on subphrenic abscesses and jejunostomy are now classics, and he succeeded in accomplishing what John Simon and Thiersch had only partially realized, that is, a permanent communication between the bladder and rectum in cases of exstrophy of the bladder. He had been long at work on a Manual of Special Surgery, and the first part has been published.

Miscellany.

THE ST. LOUIS EXPOSITION.

Plans for the Elaborate Pathologic Exhibit—Hospitals to Show Details of Their Operation.

THE HOSPITAL EXHIBIT.

The hospital exhibit of the St. Louis Exposition, 1904, is to be in the department of social economy, under the section of charities and correction. This exhibit will be displayed in the Palace of Education and Social Economy, which has a very prominent location.

Here are to be shown models of grounds and buildings, architectural drawings, photographs, charts and statistics relating to the hospital and its management. The exhibit is divided into the following subjects for elaboration by different hospitals, dispensaries, nursing schools, etc.:

1. Classification of disease.
2. Cause of disease.
3. Prevention of disease.
4. Relation of disease to crime and pauperism.
5. Evolution of the doctor.
6. Gallery of eminent physicians and surgeons.
7. Relief on the battlefield.
8. Evolution of general hospital.
9. Architecture of general hospital.
10. Model operating room.
11. Sterilizing, anesthetizing and drug rooms.
12. Diet kitchen.
13. Clinical laboratory.
14. Pathologic laboratory.
15. Pathologic exhibit (a scientific medical exhibit).
16. Display of medical instruments.
17. Ambulances.
18. Ambulance adjuncts.
19. Emergency hospitals.
20. Infectious hospitals.
21. Hospitals for consumptives.
22. Hospitals for deformities (instruments and appliances).
23. Ear and eye infirmaries.
24. Maternity hospitals.
25. Hospitals or wards for the care and treatment of inebriates.
26. Hospitals for the treatment of morphin, tobacco and other such habits.
27. Other special hospitals.
28. Leper colonies.
29. Hospital construction.
30. Sanitariums.
31. Medical aid by missionaries.
32. Dispensaries.
33. The evolution of the nurse.
34. Gallery of famous nurses.
35. The visiting nurse.
36. Nurses' handiwork.
37. Training schools for nurses.
38. Gallery of eminent philanthropists.

THE PATHOLOGIC EXHIBIT.

Some of the best pathologists and anatomists are preparing a scientific classification for a pathologic exhibit. As now contemplated diseases will be grouped according to organs. Each gross specimen (as lung, heart, brain, liver, etc.) will be duplicated by a normal anatomic specimen. Each pathologic specimen will be accompanied by a microscopic slide where possible, showing the micro-organism causative in the production of the disease. When dissection of the normal would elucidate the medical or surgical field, the same will be present, dissected properly and preserved and mounted in the most approved way. Models, photographs and statistics will accompany the pathologic specimens.

The department announces that the object of the pathologic exhibit is to indicate as succinctly as possible the rise, progress and present status of our knowledge of disease in man and the domestic animals. The choicest pathologic specimens from the various medical centers of the United States, when properly exhibited according to the final plans, will form an object lesson in this department of science never before seen in this country. The exhibit will represent the work of specialists in histology, embryology, bacteriology, physiology and dissection. To make the exhibit more effective and at the same time more utilitarian for the physician, library and reading-room facilities are to be found in connection with the same. To insure greater interest in diseased tissues and organs, a series of dissections illustrating many points in the normal anatomy of man and the domestic animals will help to complete the exhibit.

It is deemed wise to classify (1) in general; (2) in particular. In the former, organs irrespective of disease are grouped; in the latter, the organic classification is subordinate to diseased structures. As previously stated, according to the special classification, diseases or diseased parts regardless of organ or part of body in which found, characterize this classification, such as tumors, fractures, skin diseases, etc.

Exhibitors are not required to comply with every feature of the arrangement set forth under the general classification, although this is earnestly desired when circumstances permit. Where an exhibitor sends in, e g., a pneumonic lung only, the department will see to it that the other features, such as slides and normal anatomy, are properly cared for. Parties competing for prize dissections illustrating normal anatomy inform us of the region to be dissected.

To set forth the scheme of the general classification in its proper form let us illustrate the essential features by an analysis of one organ, as, e. g., the lung. In this department will be exhibited normal and diseased lungs arranged for study as follows:

1. Dissections showing normal human lungs.
2. Dissections showing normal domestic animals.
3. Microscopic slides, normal.
4. Pathologic specimens, gross.
5. Pathologic specimens, microscopic.
6. Cultures and culture processes.
7. Charts, devices and stereopticon views.
8. Books and reprints on anatomy, histology, bacteriology and pathology of pulmonary diseases.

Colleges, hospitals and individuals are asked to furnish approximate lists of the specimens which they will exhibit. Correspondence should be opened up at once with Alvin E. Pope, St. Louis, superintendent of the section on charities and correction.

Book Notices.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and Other Topics of Interest to Students and Practitioners by Leading Members of the Medical Profession Throughout the World. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U. S. A., with the Collaboration of John B. Murphy, M.D., Chicago; Alexander D. Blackader, M.D., Montreal; H. C. Wood, M.D., Philadelphia; T. M. Rotch, M.D., Boston; E. Landolt, M.D., Paris; Thomas G. Morton, M.D., Philadelphia; James J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh, and John Harold, M.D., London;

with Regular Correspondents in Montreal, London, Paris, Leipsic and Vienna. Volume II, Thirteenth Series. Cloth. Pp. 311. Price, $2.00. Philadelphia and London: J. B. Lippincott Company.

This work, properly a serial in book form, will be found full of practical instruction, like all the others of the series which we have seen. The subjects considered in the present volume are: "The Summer Diarrheas of Children, Disease of the Pancreas, Treatment, Practice of Medicine, Surgery, Pediatrics, Obstetrics and Gynecology, and Ophthalmology," and under each of these heads are valuable papers by well-known authors, among whom may be included Professors Conn of Middletown, Conn., Cotton, Deaver, Gay, Goffe, Bouchard and Landolt of Paris, and other names hardly less familiar. These are themselves sufficient assurance of the merits of the articles, and the work, taken as a whole, is a series of brief but valuable monographic papers on the subjects that it includes.

A MANUAL OF PRACTICAL ANATOMY. By the Late Prof. Alfred W. Hughes, M.B., M.C., Edin., F.R.C.S. Edin., F.R.C.S. Eng. Professor of Anatomy, King's College, London. Edited and Completed by Arthur Keith, M.D., Aberd.; F.R.C.S. Eng., Lecturer on Anatomy, London Hospital Medical College. In Three Parts. Part III. The Head, Neck and Central Nervous System. Illustrated by 12 colored plates and 204 figures in the text. Cloth. Pp. 387. Price, $3.00 net. Philadelphia: P. Blakiston's Son & Co. 1902.

The same general plan is carried out in Part III as in the foregoing parts. It contains 12 colored plates and 204 figures. A notable feature of this part is the repeated reference that is made to the surgical importance of many of the structures of the head, neck and central nervous system. The surface markings of the brain is dwelt on and given due consideration. The surgical anatomy of the head receives considerable attention, and the different regions from which the lymphatic glands receive their supply are mentioned. More attention is given than in ordinary books to the anatomy of the ear, and here again many references are made to surgical procedures. The description of the spinal cord is rather brief, but the brain receives the attention it deserves. In the dissection of the cranial nerves the author claims that it is more convenient to consider the last first and the first last, and he seems to carry out the plan to apparent advantage. Altogether the division of the subject of dissection into three different parts has many advantages which would be apparent to any student trying to work and at the same time care for a large unwieldy single volume.

SELECTED PAPERS ON OPERATIVE AND CLINICAL SURGERY. By the Late William Stokes, M.D., M. Ch. (Univ. Dub.); F.R.C.S.I.; Knt., Surgeon in Ordinary to Her Majesty Queen Victoria in Ireland. Edited by William Taylor, B.A., M.D. (Univ. Dub.), F.R.C.S.I., Surgeon to and Lecturer on Clinical and Operative Surgery, Meath Hospital and Co. Dublin Infirmary. With a Memoir of the Author by Alexander Ogston, M.D., Regius Professor of Surgery, University of Aberdeen. Cloth. Pp. 484. Price, 10 Shillings. London and Dublin. Bailliere, Tindall and Cox. 1902.

This work consists of a collection of the articles written during the past thirty-five years by the late Wm. Stokes, and edited by Wm. Taylor. All the articles have appeared elsewhere in the various medical journals at the time they were written, with the exception of the two South African papers added by Mr. Taylor. Most of the chapters are so old, some of them even antedating the antiseptic era, that they can have little more than a historic value. Collectively they illustrate fairly well the progress of surgery from early Listerism down to recent times.

MEDICAL JURISPRUDENCE. A Manual for Students and Practitioners. By Edwin Welles Dwight, M.D., Instructor in Legal Medicine, Harvard University. Series Edited by V. C. Pedersen, A.M., M.D., Instructor in Surgery and Assistant Anesthetist at the New York Polyclinic Medical School and Hospital. Cloth. Pp. 249. Philadelphia and New York: Lea Brothers & Co.

This little volume is intended only as a brief compendium of the facts in connection with legal medicine which every practicing physician ought to know. As such, and as a work for students, it is not exhaustive, but in the main it gives a very fair and reliable summary of the principal facts. A notable omission, however, is that of the biologic blood test, which certainly ought to be included in every work coming out in 1903. The part devoted to insanity is necessarily brief and hardly sufficiently complete for this day. Aside from these, and possible one or two other minor points, the book is one to be generally commended.

Association News.

REPORT ON THE SCIENTIFIC EXHIBIT

Of the American Medical Association, at New Orleans, May 5-8, 1903.

By Frank B. Wynn, A.M., M.D., Chairman.

The fourth Scientific Exhibit of the Association was most successfully consummated, despite obstacles which for a time threatened a favorable outcome. The remoteness of New Orleans from sources of material and a three-month period in which to accomplish the work, cast a gloom over those deeply interested in the continued success of the movement. Too much can not be said in praise of those who came nobly to the rescue at a critical time. On the roll of honor are twenty-eight persons who labored faithfully, without money and without price, for the common good of the profession and the success of the meeting. Among them are those distinguished both in the scientific and practical fields of medicine, as well as young men fired with enthusiasm for the higher ideals of the profession.

In a perusal of the subjoined report it will be noted that 16 well-known colleges, hospitals or public institutions are represented and 11 private collections. The analytical reader will observe as conspicuous features three research exhibits and the general tendency of contributors to the grouping of specimens in illumination of particular phases of pathology. This is in response to the gradually evolved policy of the committee.

Lack of efficient demonstration has long been recognized by those having the matter at heart as the weak point of the exhibit. Many specimens extremely valuable as practical object lessons, remain impotent on the shelves unless intelligently demonstrated. As long as five years ago the writer, in a letter to THE JOURNAL, strongly advocated systematic demonstration in connection with the presentation of state society exhibits. It is just as important for national collections if the greatest degree of instructive efficiency is to be attained. It was hoped in the outset that exhibitors would see to the demonstration of their own contributions. Few, however, have been able to give so much time. The plan has also been tried of attempting to secure a large demonstration corps of medical students and young physicians resident in the place of meeting, who should alternate in escorting small delegations of visitors about the exhibit. But it was found impossible to secure a sufficient number of competent men willing to give the necessary time. The solution of this perplexing problem has come naturally in the reduction of the size of the exhibit and its specialization. In this way demonstration becomes simplified and less laborious.

The particular phases of pathology or other scientific branch of medicine illuminated in the exhibit from year to year should be varied according to the topics prominently before the profession and likely to command conspicuous attention in the Section meetings. In consonance with the ideas expressed there were shown at New Orleans very complete series illustrative of the following: Anomalies and pathologic conditions of the heart; tuberculosis in the various organs and structures of the body; amebic dysentery with sequels and intestinal lesions of tuberculosis and typhoid for purposes of differentiation; malaria; fibroid tumors; ectopic gestation; surgical diseases of the kidney; pathologic conditions of the bladder and prostate gland; renal and vesical calculi; otologic and neurologic groups. Effort was made to have these series demonstrated before the interested sections in conjunction with related papers to be read. The idea met with warm reception on the part of Section officers generally, but crowded programs made its consummation difficult of accomplishment. For the coming meeting at Atlantic City, however, it may be definitely stated that demonstrations of particular series of the exhibit will be conducted by persons of distinction, scheduled for specific hours and days on the published program.

M'GILL UNIVERSITY: GEORGE ADAMI AND M. E. ABBOTT.

1. Ruptured Tubal Gestation, Third Week.—Age 26; two full-term children, last one being 4 years of age. Menstrual history: Began at 12; regular; scanty, only lasting one and one-half days. Complaints on admission: Sudden, severe pain in the lower abdomen

and fainting on Dec. 1, 1902, lasting until operation on the third. Last regular period Nov. 15, 1902, but since then any exertion would cause flow. Nauseated two weeks and had two chills the day before operation. Pulse weak, thready, 168; respirations, 44, labored; temperature, 98 2/5. Operation Dec. 3, 1902. Abdominal cavity contained a large quantity of fluid blood. Recovery.

2. Tubal Pregnancy. Rupture in Early Weeks.—Aged 26. Last labor eight months previous. Last regular period June 13, 1900; menstrual flow from May 17 to June 3, with severe pains in abdomen, persisting until June 13, when they became very severe and collapse developed. Pulse, 115; respirations, 44. Abdominal section. Recovery.

3. Ectopic Gestation.—Specimen a five and a half months fetus, which had remained in the abdominal cavity seventeen years, having been killed by application of electricity. Fetus now represented by a mass bent on itself, the bones of vertebral column, ribs, one upper extremity and part of cranium still plainly made out. Patient aged 55. In 1885 right tube found to be seat of gestation of five and one half months. Gestation was checked by application of electricity. For eight years the patient was well, but for the past nine she has had recurring spasmodic pains, growing worse and worse. Abdominal section Dec. 13, 1902. Recovery.

4. Fetus, Sac and Tube. Ectopic Gestation, Five and One-half Months.—Patient aged 30. Complained on admission of epigastric pain, vomiting and weakness. Pulse, 160; respirations, 36; temperature, 98.8 F. Last menstruation Jan. 26, 1901. Usual signs and symptoms of pregnancy marked. During night of July 3 was seized with paroxysms of epigastric pain and vomiting, followed in some hours by a chill. On July 4 had three fainting spells. Pelvic examination revealed a soft cervix, to which was attached a firm globular mass. Neither ballotment nor rhythmic contractions could be felt. Operation July 4, 1901, revealed fetus floating in free blood in the abdominal cavity. Recovery.

5. Tubal Pregnancy. Ruptured in Third Month.—Enlarged uterus and appendages; the right tube enlarged to form tumor size of an orange; laid open to show placental tissue, fetus and cord *in situ*. Fetus apparently dead some time. Pelvic hematocele and septic peritonitis. Patient aged 32; amenorrhea and morning vomiting for three months; severe crampy abdominal pains, with bloody vaginal discharge for three weeks before death from septic peritonitis.

6-9. Ruptured Tubal Pregnancies.

10. Section Through Pelvic Organs, Showing Multiple Fibromata Uteri, with Calcification.

This beautiful exhibit was solicited as a special feature in illumination of ectopic gestation, which was one of the topics prominently considered by the Section on Obstetrics and Diseases of Women. It was the second contribution of McGill University to the Scientific Exhibit of the Association, and testifies most forcefully to the scientific spirit and friendly cooperation of our Canadian colleagues.

CINCINNATI HOSPITAL AND CINCINNATI ACADEMY OF MEDICINE: HORACE J. WHITACRE, ASSISTED BY J. C. BUTTEMILLER AND MARION WHITACRE.

In conformity with the suggestion of the committee the following contribution was arranged to illustrate chiefly one phase of surgical pathology, viz., surgical diseases of the kidney.

Nos. 11-78. Group I. Surgical Diseases of Kidney.—68 wet specimens, showing the following range of lesions: Contracted kidney; large white kidney; rupture of kidney (nephrectomy); cystic kidney (four varieties); pyelitis; hydronephrosis, from stone in ureter, from hypertrophy of prostate, from cancer of the vesical ends of both ureters, and from stricture of urethra; pyonephrosis (eight specimens); stone in pelvis of kidney (several varieties of stone); tubercular kidney; sarcoma of kidney; retroperitoneal sarcoma and carcinoma.

Especially beautiful in this group were two congenital cystic kidneys; also the series of tubercular kidneys. One specimen showed a definitely circumscribed tuberculous mass in one end of the organ; another great numbers of miliary tubercles; another multiple caseous foci varying in size from a pin-head to a large pea; a fourth was reduced to shell one centimeter thick; in a fifth the capsule formed a sac filled with caseous matter, but no demonstrable tubercular tissue; and a sixth constituted a tumor the size of a child's head.

Nos. 79-104. Group II. Calculi.—Removed from the pelvis of the kidney, from the middle of the ureter, from the vesical end of the ureter and from the bladder. Fifteen of these loaned by Joseph Ransohoff; others by J. C. Oliver, N. P. Dandridge and William Judkins.

The specimen of pyonephrosis with stone in the pelvis of the kidney presents some features of unusual interest. First a stone weighing six and one-half ounces was removed by operation; four weeks later the kidney was removed, as the patient did not improve. Later it was found that the kidney of the opposite side was totally destroyed and contained a large stone.

Nos. 105-110. Specimens of Ectopic Gestation.—Presented by Charles L. Bonifield and John Miller.

No. 111. Embolism of Left Coronary Artery.—This case occurred in the practice of Paul Millikin of Hamilton, Ohio. The patient, a young man, died with marked symptoms of angina pectoris. The necropsy revealed a ruptured chorda tendineæ protruding from the mouth of the vessel, while on the end within the artery was a small thrombotic mass completely occluding the vessel.

Not only from a pathologic standpoint was this collection most excellent and instructive, but in an artistic way as well. Most were Kaiserling preparations, mounted with great care. It was the third contribution from Cincinnati to the National Exhibit and constitutes a forceful example of the stimulating effect of the exhibit in awakening local interest in practical pathology. Three years ago the showing of Cincinnati at St. Paul was meager; at Saratoga decided improvement was noted; and the superb collection presented at New Orleans reflected great credit on the profession of Cincinnati, and gives proof of substantial progress in the field of practical pathology.

MEDICAL DEPARTMENT TULANE UNIVERSITY: O. L. POTHIER.

Nos. 112-219. Photographs.

This excellent array of photographs was designed to show more particularly the diseases prevalent in the colored race, such as keloid, leucoderma, elephantiasis, etc. One beautiful picture was of a most extensive case of pemphigus in the negro, followed by cure. Another photograph was of a case of pseudohermaphrodism, presenting a most interesting history. The individual was 45 years of age when admitted to the female wards of the Charity Hospital of New Orleans. He had always supposed himself a woman, and had always lived among women. It was by accident that the physician in charge discovered that the condition was simply hypospadias. The man refused to put on male clothing, and when transferred to the male wards took the first opportunity offered to run away.

No. 220. Double-Headed Monster.—A noteworthy specimen from a colored woman. She had traveled some distance from the country with one of the heads born. When admitted to the Charity Hospital the case was supposed to be one of twins which had become locked. As the first child (?) was dead, amputation of the head and shoulder was performed. Recognition of the monster came only with the birth of the other part. An examination of the monster revealed four lungs, two hearts, two stomachs, two duodenums for a distance of about an inch, after which they fused, and single intestine. There were two kidneys, one liver, one spleen, and the organs of reproduction single. The body showed two heads, two spinal columns, two spinal cords, fusion taking place at the sacrum, two arms and two legs.

No. 221. Elephantiasis of Penis.—The subject was a negro who presented no other evidence of the disease. The organ measured twelve inches in length and fourteen in circumference.

Nos. 222-235. Miscellaneous Gross Specimens.

The collection gave ample evidence of the richness of the field for the study of pathologic conditions more or less characteristic of the negro. New Orleans offers in the Charity Hospital a wealth of material which under the present efficient pathologic dissection will yield valuable results in the near future.

MEDICAL DEPARTMENT, UNIVERSITY OF TEXAS: W. S. CARTER.

Nos. 236-255. Apparatus.—Some twenty pieces for physiologic experimentation, largely constructed in the Harvard laboratories under Professor Porter, and partly devised in the laboratories of the University of Texas.

Nos. 256-315. Tracings.—Six books, very neatly made by students of the university and grouped as follows:

(*a*) Frog's heart and circulation: showing influence of cold and warm physiologic salt solution on heart beat.

Peculiarities of heart muscle: staircase contractions after first ligature of Stannius; latent and refractory periods; maximum contraction with minimum stimulus; separate contractions from tetanizing current, etc.

Innervation of heart: augmentation of heart beats from stimulation of sympathetic; stimulation of vagi and crescent normally and after application of nicotin; crossed action of muscarin and atropin on ganglia of heart, etc.

Blood pressure in aorta: effect of cardiac inhibition of reflex vasoconstriction by stimulating a sensory nerve and the fall of pressure from destroying spinal cord.

(*b*) Circulation in mammals: showing effect of bleeding and transfusion on blood pressure. Effect of chloroform and ether respectively on the circulation and respiration; influence of artificial respiration after respiration stops.

The effect of stimulating the great splanchnic in the dog before and after cutting the vagi; stimulation of the (*a*) central and (*b*) peripheral ends of the cut splanchnic.

Stimulation of the depressor nerve before and after section of the vagi (rabbit).

Effect of adrenal extract, of peptone, of cutting spinal cord high up, Traube-Hering curves, etc.

(*c*) Respiration: effect of inflation and collapse of the lung on respiratory activity; apnea; stimulating a sensory nerve; stimulating the trigeminus and superior laryngeal (causing inhibition); stimulation of the vagi with feeble and strong currents; effect of section of vagi on the frequency and depth of respiration, etc.

(*d*) Muscle and nerve experiments: showing myogram with drum at fast speed and tuning fork waves making hundredths of a second; extensibility and elasticity of muscle; effect of heat and cold on myogram; heat rigor; effect of load on myogram; influence of veratria and suprarenal extract on muscle twitch; analysis of tetanus, showing tracings with 8, 16, 24, 40 and 50 stimuli per second; fatigue curves; electrotonus—effect of galvanic current on the irritability and conductivity of nerve, etc.

The foregoing is sufficient to acquaint the reader with the fact that physiology as taught at the State University of

Texas is abreast of the leading institutions of the country and keeping pace with the commercial progress of the "New South."

NORTHWESTERN UNIVERSITY MEDICAL SCHOOL: WINFIELD S. HALL.

No. 316. Frog-Board Myograph.—An inexpensive and convenient myograph, an improved ergograph, especially adapted to work in general physiology and pharmacology. Its advantages over other similar instruments are: 1. The muscle-nerve preparation can be made in at most one-fourth the time required for the classic preparation. 2. The muscle and nerve are not exposed to atmospheric changes. 3. The circulation of the tissues is not disturbed. This has the advantage (*a*) of permitting the study of the action of drugs on muscle tissue under normal conditions, (*b*) of studying fatigue without the accumulation of fatigue products under abnormal conditions.

No. 317. Manometer Tambour.—A modification of the classic manometer apparatus. A small tambour was joined to the distal end of the manometer by a piece of pressure tubing and supplied with a delicate tracing lever, capable of magnifying the movements of the membrane ten to twenty times, as desired. With the surface of the tambour not larger than 15 mm. and the mercury meniscus not less than 3 mm. in diameter, the most beautiful arterial pressure tracing can be obtained, showing not only the respiratory and percussion waves, but the dicrotic wave clearly superimposed on each cardiac wave.

(To be continued.)

Medical Organization.

MEDICAL ORGANIZATION METHODS AND BENEFITS.

J. N. M'CORMACK.

(Continued from page 569.)

HOW DISSENSIONS GROW.

His location chosen, say in a community where there are two physicians already, he is fortunate if he is not met at the threshold, the most sensitive and impressionable period of his life, with ill-concealed sneers, or complete ostracism by those already established in practice, which will grow if he succeeds, or rapidly disappear if he proves a failure. With time, and an arm's length acquaintance which can not be avoided entirely, he will probably learn that one or both of his professional neighbors practically dropped their studies at graduation; that they receive little or no new literature except the free copy advertising journals; that they have no proper equipment for the emergency surgery they must do, or pretend to do, while time was habitually given over to petty professional bickerings and contentions sufficient to have made both of them scholars of no mean attainments in medicine as well as in general knowledge, had it been utilized in single, or better still, in joint study. Although they constantly need each other's advice and help as no other men ever can do, he is likely to find that this spirit of envy and jealousy, pitched on a plane low almost beyond conception, not only deprive them of these, but so divides them and impresses the community as to greatly lessen the respect and confidence due both of these otherwise worthy men, as well as the great profession which they alone represent in that community. He will find that they often quarrel about diagnoses in which both were wrong; about patients who would not pay either of them, or about violations of the code which neither of them have read; that each is afraid to collect his hard-earned fees for fear the other will inherit some of his offended patrons; that ambition for excellence in surgery or other special work is dwarfed by the fact that one will send for consultation, or send his surgery, to a distant town or city rather than ask the assistance of his neighbor, and that even their families are so estranged as to be deprived of social relations and pleasures of which both are most deserving. In a word, our graduate is likely to find that this canker of envy and jealousy which clings to our otherwise noble profession with such tenacity, and blights and curses, and curses and blights, all to which it clings, not only bars or makes all advancement difficult, but so interferes with all the social and other interests and purposes of the profession as to destroy his ideals of life. Gradually the dominant bias of his college life begins to assert itself, and with no society influence to correct the evils, or even to furnish him the opportunity of learning that his competitors are well-meaning men personally, who were stunted and misshapen by the same process to which he is being subjected, our graduate, whose horizon was probably never large, but certainly susceptible of enlargement, will be in great danger of becoming the victim of his environments, and grow smaller and smaller with the years, until he becomes a physician only in name.

POVERTY AND OTHER ILLS CAUSED.

It is mainly this spirit and the resulting conditions which cause so much poverty in the profession, interfering with it in every business aspect, just as the loss of public respect and confidence directly traceable to it accounts for most of the difficulties in securing needed medical and health legislation and in enforcing such laws when enacted.

And this is no fancy sketch. Let him who doubts its fidelity to truth try to induce some physician of the same community, somewhere outside of the long organized sections, or the occasional nature's nobleman, as an exception to prove the rule, to speak in real kind and unstinted praise of each other. It has become such a custom for physicians to refer to each other in terms of detraction, or by damning with faint praise, that one is disappointed in going to a strange community not to hear it, and always, whether in the country between two physicians, or in the city between two factions, whether done with the clumsiness of the boor or the finish of the scholar, back of it may be seen the same hideous monster of personal envy and jealousy which has dominated our profession for ages like one of the demons of mythology.

That such glaring and hurtful evils should fasten themselves on a great, noble and really learned profession like ours, generation after generation, and make its dissensions a by-word and term of reproach in common speech and literature, has been difficult for many to understand. As men and citizens, its individual members will bear favorable comparison with any and all other classes. They do more for the poor, more actual Christian charity, every day in the year than all the churches, preachers, Christian Endeavors, Epworth Leagues and similar institutions combined. They can and do live in peace and amity with everybody in the community except each other.

REASONS FOR THESE CONDITIONS.

On investigation it will be found that this is a condition common to all unorganized vocations whose members lead segregated lives. It is a recognized fact in history that the inhabitants of islands are suspicious and sensitive. This seems to be equally true of most individuals who live apart from their fellows from any cause. Until the prevalence of the community-of-interests idea induced systematic organization, the rivalry between local bankers was proverbial, and until the day of ministerial associations, with the weekly meetings, and opportunity for acquaintance and agreement as to matters of policy and public concern, and at least decent and respectful tolerance as to essentials, the condition of the ministry was worse. Instances might be multiplied indicating each similar vocation. On the other hand, lawyers have always lived together in peace and plenty. This is not because they are better men, or that their profession is a broader one, but for the reason that in the ordinary pursuit of their calling they are brought into constant contact with each other, come to know each other, and, being worthy men in the main, mutual respect and tolerance for each other's faults and shortcomings grow up naturally and unconsciously. In addition, every term of court is a free training school, with a constant and almost ideal attrition of mind against mind. Those who do not study go to the rear and lose out. Those who do not polish off their angles get them knocked off. After the hard words and fierce conflicts, sometimes unavoidable when earnest men contend over serious and weighty matters, which physicians would treasure up and pout about for years, rolling and trolling them on the tongue as dainty morsels long after they were barred by every statute of limitation, being encouraged to do so by other kindred spirits and custom, lawyers or their professional friends usually effect an immediate reconciliation, go arm-in-arm to the nearest cafe to bury the chance enmity in a lunch, julep or cocktail, and are only the better friends for having tried each other's metal.

(To be continued.)

Harrison County (Miss.) Medical Society.

This society met at Biloxi, August 12, and perfected reorganization.

Delaware County (Ind.) Medical Society.

At a meeting held in Muncie, August 13, the society voted to reorganize under the plan recommended by the American Medical Association.

Leon County (Fla.) Medical Association.

This association was organized at Tallahassee, August 7, with the following officers: Dr. William E. Moor, president; Dr. Henry E. Palmer, vice-president, and Dr. C. M. Ansley, secretary, all of Tallahassee.

Yolo County (Cal.) Medical Society.

Pursuant to call of Dr. Walter E. Bates, Davisville, the physicians of Yolo County met at Woodland, August 13, and organized a county medical society, electing Dr. Walter E. Bates, Davisville, president, and Dr. Fairchild, secretary.

Boone County (Iowa) Medical Society.

Medical men of Boone County met at Boone, August 18, to organize a county medical society in affiliation with the state and National organizations. Dr. William L. Pollock, Boone, was made temporary chairman, and Dr. Myers, temporary secretary.

Codington County (S. Dak.) Medical Society.

On August 5, fourteen physicians met at Watertown and took the first steps toward the organization of a county medical society to be in affiliation with the state and National organizations. Permanent organization is to be effected September 15.

Orange County (Texas) Medical Association.

Dr. Benjamin F. Calhoun, Beaumont, councilor for the Southeast District, met the physicians of Orange County at Orange, August 4, and delivered an address on organization, after which the society was reorganized in conformity with the regulations of the state and National associations.

Hill County (Texas) Medical Association.

The Hill County Medical and Surgical Association met at Hillsboro, August 12, and reorganized as the Hill County Medical Association, in accordance with the requirements of the new state organization. The officers are Dr. George D. Bond, president, and Dr. J. M. Martin, secretary, both of Hillsboro.

Lamar County (Texas) Medical Association.

This association was recently organized at Paris with the following officers: Dr. W. G. McCuistion, president; Dr. John B. Chapman, vice-president; Dr. Alexander H. Lindsay, secretary; Dr. James M. Hooks, treasurer; Drs. Thomas Moody, and Joseph F. Clark, all of Paris, and John F. Dyer, Chicota, censors.

Floyd County (Ga.) Medical Society.

On August 4 this society was organized at Rome, in accordance with the plan suggested by the American Medical Association. The officers elected are: Dr. Ross P. Cox, Rome, president; Dr. Levi P. Hammond, Rome, vice-president; Dr. James C. Watts, Cave Spring, treasurer, and Dr. William J. Shaw, Rome, secretary.

Jackson County (Texas) Medical Association.

On July 28 the physicians of the county met at Edna and organized a county medical society, with the following officers: Dr. Joseph M. Richmond, Edna, president; Dr. J. C. Dobbs, Ganado, vice-president; Dr. Oliver H. Radkey, Manor, secretary and treasurer, and Drs. Robert E. L. La Bauve, Edna, John L. Lincecum, Victoria, and W. H. Minton, censors.

Collin County (Texas) Medical Association.

The Collin County Medical Association, at its meeting in McKinney, August 11, perfected its reorganization under the auspices of the state and National associations, with the following officers: President, Dr. James N. Mendenhall, Plano; vice-president, Dr. Austin T. Bryant, McKinney, and secretary-treasurer, Dr. Orville H. Kirkpatrick, McKinney.

Perry County (Miss.) Medical Society.

The physicians of Perry County met at Hattiesburg, August 20, and organized a county medical society, with the following officers: President, Dr. Charles W. Bufkin; vice-president, Dr. Robert B. Stapleton; secretary and treasurer, Dr. John J. Stevens; censors, Drs. Theophilus E. Ross and Walter W. Crawford, Hattiesburg, and Dr. Prentiss A. Carter, Augusta.

Black Hawk County (Iowa) Medical Society.

At a meeting of physicians of the county at Waterloo, August 17, Dr. Elmer E. Dunkelberg was elected chairman and Dr. Edward R. Shannon, secretary, both of Waterloo. After the plan of reorganization recommended by the American Medical Association had been explained the society was organized with the following officers: President, Dr. Elmer E. Dunkelberg, Waterloo; vice-president, Dr. John H. Crippen, Waterloo; secretary, Dr. William H. Bickley, Waterloo; treasurer, Dr. Will L. Hearst, Cedar Falls, and censors, Drs. Daniel W. Crouse, Waterloo, Frank H. Cutler, Cedar Falls, and M. R. Balliet, Laporte City.

Organization Work in Texas.

Although Texas is our largest state territorially, and its fifteen councilor districts cover immense and sparsely settled areas, some of them remote from railroads, the report of organization work is of the most encouraging nature. The counties, of which there are about two hundred and forty, are rapidly organizing, and it is safe to say that a majority of the 5,000 legalized physicians of the state will be officially represented in the house of delegates at the next annual meeting of the state association. This gratifying situation is due in some measure to an aroused general sentiment, which favors without qualification the splendid scheme of organization proposed by the American Medical Association. When occasion demands the councilor receives the active support of the best men of his district. They go with him to remote counties, and assist in their organization, at great sacrifice to their private interests. Moreover, the experienced and able secretary of the state association, who is serving in Texas with conspicuous ability the higher ends and aims of the great enterprise to which the medical profession of the United States is committed, watches and aids every important detail of the work of each district, and keeps the entire situation intelligently open to the profession. Let states less hopeful, but more fortunate in respect of location and means of communication, take courage and push along the good work in like manner.

Societies.

COMING MEETINGS.

Medical Society of the Missouri Valley, Omaha, Sept. 14-15.
Medical Society of Virginia, Roanoke, Sept. 15-17.
Medical Society of the State of Pennsylvania, York, Sept. 22-24.
American Association of Obstetricians and Gynecologists, Chicago, Sept. 22-24.
Colorado State Medical Society, Denver, Oct. 6-8.
Medical Association of the District of Columbia, Washington, Oct. 6.
Idaho State Medical Society, Boise, Oct. 8-9.
Mississippi Valley Medical Association, Memphis, Tenn., Oct. 7-9.
Vermont State Medical Society, Bellows Falls, Oct. 15-16.
New York State Medical Association, New York City, Oct. 19-22.

North Texas Medical Association.—This association has filed amendment to charter embracing the counties of Fannin, Hunt, Grayson, Tarrant, Johnson, Cooke, Delta, Hopkins, Kaufman, Rockwall, Collin, Denton, Dallas and Ellis.

Wabash County (Ill.) Medical Society.—This society met at Mount Carmel, August 4, and elected Dr. W. B. Moon, Bellmont, president; Dr. George C. Kingsbury, Mount Carmel; Dr. John B. Maxwell, secretary, and Dr. Sereno W. Schenck, treasurer, all of Mount Carmel.

Dallas County (Ala.) Medical Society.—At a meeting held August 6 in Selma, Dr. Henry D. Furniss, Selma, resigned as president, and was made an honorary life member; Dr. Barney

B. Rogan, Selma, secretary, was elected president, and Dr. Ira C. Skinner, Selma, secretary.

Mississippi Valley Medical Association.—The twenty-ninth annual meeting will be held in Memphis, Tenn., October 7 to 9, under the presidency of Dr. Edwin Walker, Evansville, Ind. The sections will meet at the Gayoso and the Peabody. Dr. John L. Jelks is chairman of the committee of arrangements.

Southern Minnesota Medical Association.—At the annual meeting in Winona, August 6, the following officers were elected: Dr. Christopher Graham, Rochester, president; Drs. William F. Milligan, Wabasha, and Frank W. Dimmitt, Red Wing, vice-presidents, and Dr. William T. Adams, Elgin, secretary and treasurer. The 1904 meeting will be held in Rochester.

BRITISH MEDICAL ASSOCIATION.

Seventy-first Annual Meeting, held at Swansea, Wales, July 28 to 31, 1903.

(By Our Special Representative.)

(Continued from page 572.)

Ocular Changes in Relation to Renal Disease.

MR. EDWARD NETTLESHIP contributed a paper on this subject. Although much is already known about the eye changes in renal disease, he said information is still needed, both from ophthalmologists and physicians, on several points, and he suggested the following heads as furnishing matter suitable for discussion:

1. Does albuminuric retinitis ever occur in primary acute nephritis other than the kidney affection of pregnancy?

2. Cases of retinitis from lardaceous disease of the kidneys and from nephritis due to inflammation of the bladder, ureter, or pelvis of the kidney should be recorded.

3. The retinitis of pregnancy. Cases of this are desired: (a) In which it is known that the kidneys were diseased before the first pregnancy; (b) in which there is positive evidence that they were sound. It seems that most of the cases of pregnancy retinitis occur between the ages of 30 and 40, after several pregnancies and several attacks of pregnancy dropsy, and that the prognosis for life is better than in ordinary renal retinitis. These facts harmonize with the other evidences that the kidney disease induced by pregnancy is a peculiar and often recoverable affection. All cases of pregnancy retinitis should be examined for signs of established chronic nephritis. The propriety of inducing premature labor may depend partly on the diagnosis in this respect.

4. Age and sex. If all cases of renal retinitis (except those due to pregnancy) are counted together without reference to age the males are found to be nearly twice as numerous as the females, the proportions being about the same as for chronic nephritis. But when the retinitis occurs early in life the sex proportions seem, from the scanty material available for comparison, to be almost reversed. All cases of renal retinitis in young subjects should be recorded.

5. Recognizing two chief factors in the production of renal retinitis—the state of the blood and the state of the retinal blood vessels—all cases are asked for in which a condition of visible disease in the retinal arteries without evidence of kidney disease has been followed sooner or later by unequivocal signs of chronic nephritis.

6. Do the characters of the retinitis in different cases, as has been recently asserted, justify any inference as to the kind of nephritis (chronic interstitial or chronic parenchymatous) from which the patient is suffering? Attention is here called to the importance of watching the course of the retinal disease from beginning to end, and of distinguishing between the two kinds of white opacities: the soft-edged, white, or grayish white patches in the nerve-fiber layer, and the brilliant, intensely white, sharply-defined patches composed of confluent dots situated in the deeper layers and often arranged in the familiar radiating pattern around the yellow-spot.

7. When retinitis occurs in both glycosuria and albuminuria, to which of these is it due? Retinitis in diabetic persons, whether their urine contains albumin or not, occurs later in life than albuminuric retinitis, but the relative liability of the sexes is about the same as in the ordinary albuminuric retinitis (excluding pregnancy cases).

8. Other points needing elucidation: The influence (a) of scarlet fever and (b) inherited syphilis in producing the chronic renal disease leading to retinitis; (c) the occurrence of renal retinitis in only one eye; (d) cases in which more than one attack of retinitis has been seen and watched through, with special reference to the changes left by the first attack, and to the effect of retinal atrophy on the characters of a second attack; (e) when pigment spots are left by renal retinitis, why are they so often found at the periphery of the fundus? (f) the cause of the night blindness occasionally met with in renal retinitis; (g) the nature and ophthalmoscopic appearances of the choroiditis said to occur in some cases of albuminuria; (h) the nature of the white, opaque thickening of the coats of arteries and veins seen after some cases, and of the appearances resembling retinitis pigmentosa after others.

The Management of Pregnancy Complicated by Uterine Fibroids.

DR. AMAND ROUTH, London, read a paper on this subject. After an introduction, the danger of the complication is discussed, and it shows that with modern methods the maternal mortality has been greatly diminished.

As to the effect of pregnancy on the fibroids it is doubted whether individual fibroids rapidly enlarge during pregnancy, and also whether marked atrophy usually takes place during involution. The tendency to degeneration of the fibroids, and the danger arising therefrom, especially as regards infection during the puerperium, is dwelt on, as well as the tendency of submucous fibroids to become extruded and necrotic.

In reference to the effect of fibroids on pregnancy, the view is taken that sterility is not often caused by fibroids, and if present is due to changes in the endometrium and to altered relation of tube and ovary. It is further shown that abortion is not often induced by fibroids unless they are submucous. Fetal malpresentations and placenta previa are shown to be frequent. Uterine inertia is not usual, but delay in labor is the rule. Postpartum hemorrhage is frequent. Obstruction to the birth of the child often threatens, but is almost consistently absent at labor owing to the spontaneous elevation of the pelvic fibroids during the last few weeks or days of pregnancy. Sepsis with secondary infection of the fibroids is a great danger in the puerperium.

Concerning the treatment, in all cases an expectant treatment is indicated unless there are urgent symptoms. (a) Before fetal viability, gentle attempts may be made to replace a pelvic fibroid. Induction of abortion should be abandoned. If urgent pressure symptoms supervene, myomectomy becomes the ideal operation for subserous fibroids, and failing that, hysterectomy. The indications for the two operations are discussed. (b) After fetal viability, reposition of an obstructing fibroid may be tried, leaving radical treatment for a later date. The danger to the mother of delivering a child by forceps, version, or embryotomy is insisted on. If a cervical fibroid be present it may be dealt with by vaginal enucleation as an alternative to panhysterectomy. In all other cases of obstructing fibroid, abdominal section is required, and as a first step the child must be delivered by cesarean section.

Subsequent alternative procedures are enumerated by the author as follows: 1. Cesarean section alone—this would rarely be the right treatment. 2. Sterilization of the patient by oöphorectomy, with the hope that atrophy of the fibroids would follow, would now rarely be considered a satisfactory operation. 3. Myomectomy. Sometimes this operation is indicated, but should always be preceded by cesarean section. 4. Abdominal hysterectomy. Preference is given to the supravaginal operation, with retroperitoneal treatment of the stump by Baer's or Chrobak's method, and to panhysterectomy by Doyen's method. One ovary at least, if healthy, should be retained.

Two successful cases at full term of supravaginal hysterectomy with retroperitoneal treatment of the stump were reported.

During the puerperium, if fibroids become infected from uterine sepsis, a prompt panhysterectomy, he believes, may save the patient's life.

Trypanosomiasis.

SIR PATRICK MANSON discussed this subject. After referring to the history of the subject and its importance, he discussed the following points:

1. *Examination of Blood for Tropical Micro-organisms.*—For an examination of the blood in the tropics, in addition to enumeration of the different kinds of blood corpuscles, three classes of micro-organisms have to be kept in view. Each of these demands its special method of preparation of the blood film and special magnifying power. The search for (a) filariæ is best conducted in thick, unfixed dehemoglobinized, anilin-dye stained films with a low magnification—½ inch to ¾ inch objective to ¾ inch objective; for (b) trypanosomes a thinnish, fixed anilin-dye stained film with an ⅛ inch to a ¼ inch objective; for (c) malaria parasites and bacteria a very thin, fixed and stained film with a 1/12 inch immersion lens.

2. *The Clinical Features of Trypanosomiasis.*—In the European (a) irregular fever, (b) fugitive patches of erythema, (c) irregularly distributed cutaneous and subcutaneous edema, (d) muscular debility, (e) rapid pulse, (f) history of painful inflamed bite. These seem to be constant. Additional but apparently not invariable or absolutely characteristic features are enlargement of the spleen, mononuclear leucocytosis and affections of the eye.

In the native, judging from some of Dutton's cases, the trypanosome may give rise to no obvious clinical symptoms.

3. *Possible Relationship to Other Diseases.*—An association with sleeping sickness has been pointed out by Castellani and confirmed by Bruce. Castellani, by indicating the frequent presence of the parasite in the cerebrospinal fluid and blood, and Bruce, by showing their invariable presence in all the considerable number of cases which he has examined at Entebbe, have adduced presumptive evidence in favor of regarding the trypanosome as the cause of this disease. Although such evidence points to such an inference, it can not be said to be conclusive. The occurrence of the parasite in the cerebrospinal fluid, that is, in close relationship with the seat of sleeping sickness—the nervous system—is a strong argument for the hypothesis; but the mere concurrence of the parasite and the disease in a limited number of cases coming from a very limited district must not be given too much weight.

He has shown for the Congo, and Low and Castellani for Entebbe, that a similar concurrence obtains in the cases of filaria perstans, but we now know that there are districts where filaria perstans is rare and sleeping sickness common, and vice versa; it is possible that when fuller investigation has been made into the distribution of the trypanosome we shall learn that a similar non-correspondence in the distribution of the latter parasite and this disease may obtain. Against a specific relationship of the trypanosome to sleeping sickness are the facts that the parasite has not given rise to the disease in Europeans, and that the parasite has not been found in sleeping sickness on the Congo or in West Africa. The former objection might be explained by the assumption suggested by Castellani that the trypanosome hitherto found in Europeans is a different species to that found in sleeping sickness; the latter objection, and it is one which is quite entertainable, might be explained by the probability that so far the blood in Congo sleeping sickness has not been critically examined for trypanosomes in a sufficient number of cases.

On the other hand, it is quite conceivable that the trypanosome of the African bears the same pathogenic relationship to the European that the trypanosome of the African wild game bears to exotic domestic animals; that is to say, that whereas the native man and beast are immune in a pathogenic sense to the native trypanosome, the exotic European and European domestic animals are not so. Such a theory seems to be more in harmony with the epidemiology, symptoms, and pathology of sleeping sickness than that enunciated by Castellani and endorsed by Bruce.

Certain obscure tropical fevers should be studied with an eye to a possible trypanosoma etiology, notably hyperpyrexial fever of West Africa and kala-azar of India and elsewhere.

Before much progress in this direction can be made, better and surer methods must be devised for determining the presence or absence of trypanosomes. We must have more easily applied microscopic methods, and, above all, we must find some easily available susceptible animal.

4. *The prognosis of trypanosomiasis* is not necessarily bad; that of sleeping sickness is always so. This is another argument against regarding sleeping sickness as a trypanosoma disease.

5. *Treatment* as yet must be conducted on general principles—rest and tonic influences.

6. *The prophylaxis* will be surely indicated so soon as we know what animal probably, judging by analogy and a small number of facts, one of the Tabanidæ is of the inoculating agent.

(To be continued.)

CANADIAN MEDICAL ASSOCIATION.

Thirty-sixth Annual Meeting, held at London, Ont., Aug. 25 to 28, 1903.

The President, W. H. Moorhouse, M.B., London, in the Chair.

This meeting was a very interesting and profitable one, and over 300 physicians were in attendance. A summary of some of the scientific papers follows.

Address in Medicine—The Lymph Circulation in Modern Medicine.

DR. H. A. MCCALLUM, F.R.C.P., delivered the address in medicine. He pointed out that the lymph circulation during the last decade has assumed enormous importance in the physiologic world. Twelve years ago Heidenhain experimented with different agents to determine their effect on the amount and character of the lymph coming from the thoracic duct; he was able to influence its quantity and quality.

From his experiments he concluded that the endothelial cells of the capillary wall acted as a secretive filter. Many physiologists from physiologic evidence have arrived at a separate conclusion that lymph depends on tissue activity; as an illustration, a limb in perfect repose gives no lymph from the lymph ducts; massage, active or passive movement, is at once followed by a free flow. The quiescent animal, it is now agreed, gives lymph from the thoracic duct, almost wholly obtained from the viscera.

In order to arrive at a clear comprehension the modern anatomy of the lymphatics should be considered. Ranvier, Sala, W. G. McCallum and Florence R. Sabine have separately agreed that the lymphatic system is a modified portion of the circulatory system; that it grew backward from the subclavian vein by the process of budding, gradually invading the tissues; that the ends of the lymphatics are blind, like the lacteals, and that they had no physical connection with the tissue spaces. Certain tissues, like cartilage and cornea, are not invaded by lymphatic capillaries.

These anatomic facts disprove all lymph circulation theories, since they prove that lymph is a double circulation composed of tissue juices and the lymphatic or absorbent circulation.

The lymphatic circulation is independent, the interchange on the part of lymph is to rid itself of offensive material and certain secretions as defensive proteids and to obtain in exchange from the blood nutritive material and oxygen.

The two great forces of lymph circulation are glandular activity and the muscular system. The great amount of the involuntary muscular tissue due to its wide area was shown to exist in the skin, modern research on the relation of the skin to internal viscera was pointed out, and the sympathetic pain reflected from the viscera could be palliated by a reflex act from the skin to the viscus; the lung reflex of Abraham was an example.

The importance of the skin as an external body connecting with all forms of impressions was pointed out, we would not

possess a heat regulating mechanism if it were not that impressions could wake up the laboratories of the body. The application of cold, heat, sunshine and fresh air are primal forces, and they act on external body world as in treatment of phthisis, the cold bath treatment of typhoid and the massage treatment of malnutrition. If the skin is so potent, how great must be the influence of the central nervous system in influencing vital activity in the way of training the patient to cease complaining to minimize sufferings and to alternate periods of alertness and absolute repose.

The importance of the lymphatic circulation in the solution of unsolved medical problems and its ancient character were pointed out. It is a field of inquiry that will be enriched in the future.

The Physiologic Generation Cycle of Woman.

DR. JENNIE G. DRENNAN, St. Thomas, Ont., said that we can see in the process of evolution that structure is determined and preceded by function and function by environment. Thus in the generative system changes due to changes in environment occur. Adaptation and heredity are the two factors which cause the changes wrought by evolution. Thus evolution works both backward and forward. The physiologic generative cycle is comprised of three factors, ovulation, pregnancy and lactation. These follow each other in physiologic sequence, one being completed before another begins. Every physiologic process is accompanied by a physiologic hyperemia, and so during the different periods the circulation is increased in that organ, which is functionally active. If from any cause a larger amount of blood is directed to a non-active organ the active organ is deprived of some of its normal blood supply and its function is lessened.

Ovulation, with its attending sexual excitement, is to the mammal what blossoming is to the plant, an evidence on the part of each that a seed is ready for impregnation. Fecundation normally should follow ovulation, then pregnancy and lactation. This is the physiologic cycle in mammals, and the primitive human female. But in the woman of civilization this cycle is interrupted by a lesser, a monthly, one, consisting of ovulation and menstruation. This is a pathologic condition arising from non-adherence to natural law. In primitive woman this lesser cycle occurs only occasionally and does not interfere with the larger circle, but as the scale of civilization is ascended the reverse is the case. Civilization precedes menstruation. Every menstruation is the sign of a disappointed pregnancy. The human female has thirteen of the periods in a year; why this frequency in an animal whose offspring requires longer time for development *in utero* and for sustenance after birth? Should one not naturally expect ovulation to occur at much longer intervals? Such would be the case if natural law had been and were now obeyed; if an adaptation to a pernicious environment had not occurred.

In mammals and primitive woman ovulation occurs at distinct periods of the year and at no other time. Mating with the primitive woman was much like that of the brute creation now; as soon as she was sexually mature she married and entered on the physiologic cycle of a mammal, one factor of this cycle following another as night follows day and day night. As she nourished her child about two years, the length of the cycle would be about three years. Primitive peoples do not produce large families.

In the married aspirant to civilization a disrespect to natural law has arisen, and error has been handed down. As a race becomes more artificial in its mode of life it becomes a more sexually-inclined race; every factor in life is then sought as a source of pleasure. The sexual element becomes adapted to the new state of life; the function of the ovary is increased and ovulation becomes a monthly phenomenon and the lesser cycle predominates.

The Size of the Pupil as an Aid to Diagnosis.

DR. J. T. DUNCAN gave this classification:

A. Pupil may have pupils evenly contracted. This may indicate: (1) locomotor ataxia, (2) meningitis and encephalitis (early stages), (3) chronic inflammation, cervical cord, (4) apoplexy of pons, (5) epileptic fits (early), (6) uremia, (7) tobacco amblyopia, (8) retinitis, (9) opium poisoning, (10) use of myotics.

B. Pupils may be evenly dilated: (1) paralysis of both third nerves (post-diphtheritic), (2) intracranial tumors (late), (3) intracranial effusions, (4) irritation cervical sympathetic, (5) acute inflammation, cervical cord, (6) premonitory of locomotor ataxia, (7) after epileptic fits, (8) cataracts, (9) amaurosis, (10) acute mania or melancholia, (11) mydriatics.

C. Pupils may be unequal, then we suspect: (1) locomotor ataxia, (2) general paralysis of insane, (3) unilateral lesion of third or sympathetic nerve, (4) pain in branch of fifth nerve, (5) old iritis, (6) carotid aneurism or tumor of neck, (7) use of a myotic or mydriatic in one eye, (8) unilateral cranial lesion, (9) acute glaucoma (unilateral).

I. The pupils are contracted and fixed: In list A we exclude uremia, meningitis and encephalitis, retinitis, tobacco amblyopia. The remaining conditions can be differentially diagnosed.

II. Pupils are evenly dilated and fixed: Rare. Present in (1) amaurosis, (2) use of mydriatics, (3) complete paralysis of both third nerves.

III. Pupils are uneven but fixed: This usually points to locomotor ataxia or general paralysis of insane.

Surgical Treatment of Hallux Valvus and Bunion.

DR. JAMES NEWELL said, in this paper, that in hallux valgus the great toe is outwardly deflected, uncovering head of first metatarsal bone, and base of phalanx is dislocated outward, resulting in tissue hypertrophy and often false bursæ. Palliative treatment is of little use; it consists in the wearing of a proper fitting shoe and keeping the great toe in position by some mechanical means.

Cases with well-marked deformity and pain require an operation. The technic must be thoroughly aseptic, not forgetting the cleansing of the skin between the toes of the patient. Incision should be made along inner side of great toe with its center over the bunion, excise the false bursa if present, deepen incision and retract the tissues, open joint and divide the ligaments. Insert a small metacarpal saw, dividing the head of the metatarsal bone just behind articular cartilage, sawing through from above, downward and backward. With bone forceps trim off sharp edges and remove exostoses. Wound is stitched with silkworm-gut sutures, a pad of cotton is placed between great and second toes, a sheet-iron splint with an upturned piece to separate great and second toes and foot and leg bandaged. Passive motion is began in third week and splint removed in four weeks. The results of the operation are ideal.

(To be continued.)

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Local Anesthesia.

The following simple method of producing local anesthesia is noted in an abstract appearing in *Med. Age*, in which a solution composed of adrenalin chlorid and cocain is used in the following proportions:

℞.	Sol. adrenalin chloridi	℥ii	8 |
	Cocainæ hydrochlor.	gr. v	| 30
	Aquæ	℥ss	15 |

M. Sig.: Fold lint into four layers and saturate it with the foregoing solution and place it on the positive electrode of a galvanic battery. A large negative electrode should be applied elsewhere, and a current of 15 to 30 milliamperes gradually turned on and continued for 15 or 20 minutes. The surface should then be washed with ether, when superficial operations

may be performed without pain and with no loss of blood. [The strength of the adrenalin solution is not given, but either 1-1,000 or 1-5,000 may be used.]

Foisy, in *La Presse Méd.*, combines the foregoing solutions as follows:

℞. Sol. cocainæ (1-200) 3iiss 10
Sol. adrenalin chloridi (1-1,000) ....gtt. x 65
M. Sig.: To be used locally in the necessary amounts.

In opening a felon or a painful boil he employs a weak solution of cocain, probably 15 drops of a 1 per cent. solution of cocain mixed with 4 or 5 drops of adrenalin. In cases where free incision or the removal of morbid tissues is necessary, such as incision of a carbuncle or removal of suppurating lymphatics, the following is used:

℞. Sol. cocainæ (1-200) 3v-vi 20.-25
Sol. adrenalin (1-1,000) .....gtt. 10-15 65-1.00
M. Sig.: To be used locally.

Cancer.

G. Mohn, according to an abstract in *Medicine*, states that he has obtained positive results in the treatment of ulcerating epitheliomas by simple applications saturated with adrenalin. By this application the hemorrhage decreased, the pain was relieved and the general health improved. In his opinion the growths were markedly retarded in their progress for a considerable length of time. In relieving the pain produced by cancer of the stomach, Robin, in *Rev. Med. du Canada*, recommends the following combination:

℞. Cocainæ hydrochlor. .....gr. 3/4 05
Codeinæ .....gr. 3/4 05
Aquæ calcis .....℥v 150
M. Sig.: One teaspoonful every hour until relieved.

Facial Erysipelas.

W. F. Rodue, in the *Surg. Clinic*, recommends the following combination in the treatment of facial erysipelas:

℞. Ichthyol 3ii 8
Etheris 3i 4
Collodii .....℥v 20
M. Sig.: Apply locally with a camel's-hair brush two or three times daily.

According to the author this solution checks the spread of the disease and quickly relieves the pain. In those individuals who are asthenic he prescribes tincture of ferric chlorid internally and in suppurative cases calcium sulphid.

Darlin advocated the use of collodion, claiming that this dressing diminished the temperature of the part, and by compression interfered with septic absorption.

The following combinations are of value, according to *Merck's Archives*, in the local treatment of erysipelas:

℞. Resorcin 3i 4
Ichthyol 3ii 8
Ung. hydrarg. .....℥i 30
Lanolini .....℥i 30
M. Sig.: Anoint the parts freely, cover with oil silk and apply light dressing; or:

℞. Acidi picrici .....gr. x 65
Etheris q. s. to dissolve.
Aq. destil. .....℥iii 90
M. Sig.: Paint over the affected area two or three times daily.

The following combination containing creolin and iodoform has also been prescribed with good results:

℞. Creolin 3ss 2
Iodoformi 3ii 8
Lanolini 3v 20
M. Ft. unguentum. Sig.: Apply locally with a camel's-hair brush and cover with gutta percha.

The following, containing lead and opium, is a common remedy, which acts very efficiently in some cases:

℞. Plumbi acetatis 3i 4
Tinct. opii .....℥i 30
Aquæ q. s. ad.....Oi 480
M. Sig.: Shake the bottle, and apply on lint thoroughly saturated with the lotion.

Urticaria.

Balzer, according to the *Internat. Med. Mag.*, has found that a solution of menthol, thymol and carbolic acid is of service as a local application in the treatment of urticaria.

He either employs them in a 2 per cent. solution in alcohol or aromatic vinegar or combined as follows:

℞. Acidi thymici .....gr. xv 1
Acidi phenici .....gr. xxx 2
Alcoholis .....℥vi 180
M. Sig.: Apply locally.

When the eruption is persistent and a prolonged treatment is required, he prescribes it in the form of an ointment. In urticaria caused by contact with insects he has found the application of ichthyol the most useful preparation. The treatment, however, must not be entirely local, but the careful regulation of the diet and attention to the digestive tract is of equal importance.

Anal Fissure.

The following outline of treatment, according to *Amer. Med.*, is recommended in the treatment of fissure of the anus:

The constipation should be combated by the administration of a teaspoonful of castor oil in the morning or a teaspoonful of the following powder in a small amount of water before retiring:

℞. Magnesiæ (calcined)
Lactose, āā 3v 20
Potass. bitartratis
Sulphuris (washed), āā.....3iiss 10
M. Sig.: One teaspoonful at bedtime in a little water.

At 11 o'clock in the morning an enema of linseed water or hot marshmallow water may be given. When the pains are less severe, these may be substituted by an enema of a decoction of krameria (20 parts to 1,000).

The following combinations should be used as ointments locally:

℞. Ext. krameriæ .....gr. xxx 2
Ext. opii .....gr. viiss 50
Cocainæ hydrochlor. .....gr. xii 75
Ung. populi .....℥i 30
M. Ft. unguentum. Sig.: Apply locally night and morning; or:

℞. Ext. belladonnæ .....gr. xv 1
Plumbi acetatis (neutral) .....gr. xlv 3
Adipis .....℥i 30
M. Ft. unguentum. Sig.: Apply locally. The following suppositories may be used as a substitute for either of the above:

℞. Iodoformi .....gr. ii 12
Ext. opii .....gr. 1/3 02
Ext. belladonnæ .....gr. 1/6 01
Ol. theobromæ.....gr. xlv 3
M. Ft. suppos. No. i. Sig.: One may be used at night and another in the morning if necessary. Forced dilatation should be practiced and locally cauterization with the silver nitrate stick every few days.

Medicolegal.

Simulation as to Pain Subject for Expert Testimony.—The Court of Civil Appeals of Texas says that, in the personal injury case of McGrew vs. the St. Louis, San Francisco & Texas Railway Company, where the party suing had been thrown from a buggy in consequence of the frightening of a horse which she was driving, that there was much evidence in the record to the effect that she was not injured to the extent claimed, and that some of her pretended injuries were feigned and simulated. One of the attending physicians who examined her injuries, and treated her for the same, testified that he had employed certain tests to ascertain whether she could feel pain in her limbs. Then he was asked whether or not she was simulating the absence of pain when the tests were applied. The court holds that it was error not to admit this evidence, the question asked, and the proposed answer

thereto, being, in its opinion, the subject of expert testimony—a matter peculiarly within the province of the physician.

A Profession is Property—Regulation of Practice.—The Supreme Court of New Jersey holds, in State vs. Chapman, that a calling, business, or profession chosen and followed is property. The legislature can not destroy it by statute without providing for compensation, any more than it can authorize the taking of real estate for a public use except on compensation. But it is within the power of the state to place reasonable regulations on the business or calling of any person. The laws regulating dentistry are of later enactment than those regulating the practice of medicine, but the principles underlying their legality are the same. And it is within the power of the state, under the police power, to impose by statute reasonable restrictions as to registration and the obtaining of a certificate of authority to engage in the practice of dentistry, and to make it a misdemeanor for a person to practice without first obtaining such certificate. The New Jersey act of March 17, 1898, entitled "An act to regulate the practice of dentistry in the state of New Jersey, and to repeal certain acts now relating to the same," is not an act taking or destroying property, but is a reasonable regulation of the practice of dentistry in that state. The act does not impair vested rights, nor is it in its criminal provisions an *ex post facto* law.

Power of President and Manager to Employ Physician.—The Court of Civil Appeals at Kansas City, Mo., holds, in the case of Evans vs. the Marion Mining Company, that the company's president and general manager had authority to bind it for medical services rendered by a physician in attending one of its employes, hurt in the course of his work through the negligence of the company. The contrary contention, it holds, was not supported by the cases cited therefor, it not appearing in them that the injury happened through the negligence of the company sought to be held liable, while, on the other hand, the officers representing the companies were of much inferior grade to that of president and general manager. In this case, it says, it must be assumed that the employe was injured through the negligence of the company. It was, therefore, liable to him for the damage occasioned by the injury, including the expense of a physician. It was directly interested in seeing that such injuries were not made worse by lack of medical attention, and that the suffering and other ill consequences should be lessened in every proper way. Its president and general manager, who was necessarily in charge of its general interests and welfare, was certainly not acting outside his duties when he was doing that which was lessening the damages for which he found it had become liable.

Duty of Railroad in Selecting Physician—Evidence.—In the case of Poling vs. the San Antonio & Aransas Pass Railway Company, where it was sought to recover damages for the loss of sight of an eye, alleged to have been occasioned by the negligence of the company in the selection of the physician who treated the case, the Court of Civil Appeals of Texas holds that there was no error in excluding evidence offered by the party suing to prove that the physician never stood an examination for license to practice medicine in Texas. It says that as to whether the physician stood an examination before the board of medical examiners that issued him a certificate authorizing him to practice medicine was immaterial to any issue in the case. The certificate was issued to him, and as to whether the board acted irregularly in its issuance could not be made a subject of inquiry in this case. Nor can the court perceive on what principle it could be contended that a publication in a local newspaper of the proceedings of the medical board of examiners of that judicial district could be admitted in evidence in this case, such publication being purely hearsay, and there being no evidence introduced or offered tending to show that the company had any knowledge of it, either at the time or after it employed this physician. Taking up the instructions given the jury, the court finds no error in telling them that, all of the evidence showing that the company derived no profit from the retention of the 50 cents per month hospital fund from each of its employes, neither had it designed same for profit, the only measure of duty owing to the party suing, an employe, by the company, arising from its agreement to furnish him with medical attention when needed, was the use of ordinary care to select, employ, and retain a competent physician as its local physician for the treatment of the party suing and its other employes in cases of sickness or injury. If they believed that the company selected, employed and retained this physician as its physician at that place, and that in selecting, employing and retaining him it used ordinary care—that is, the care that an ordinarily prudent person would have used—to select a competent physician they would find a verdict for the company, whether the physician treated the eye of the party suing properly or not.

Physician Immediately, Continuously, Wholly Disabled.—In the case of Brendon vs. the Traders' and Travelers' Accident Company of New York, it appeared that the party suing, a physician, while obliged to stand in a crowded street car, and while holding on to a strap, was, by the car starting suddenly to go around a curve, swung violently around, his weight resting on his left foot, which was held in place by the feet of other people, and his knee was twisted and strained. He felt quite a little pain at the time and a few blocks further on he transferred to another car and went to his home. The knee continued quite painful, and commenced to swell that evening. He put on cold applications and remained at home. This was the 18th of the month. In the morning the pain and swelling continued, but he made a necessary visit to a patient near by, and then returned home, and there remained. The next day the knee was still more swollen and painful, and he could scarcely move it at all. On the 21st its condition was such that he was obliged to go to bed and have it treated. A physician was called, and the knee was put in splints, and kept immovable and bandaged. He remained in bed for nearly three weeks. The First Appellate Division of the Supreme Court of New York holds that the accident "immediately, continuously and wholly disabled" him from performing any and every kind of business pertaining to his occupation, within the fair intent and meaning of an insurance policy. It says that the fact that his sense of his professional obligation to his patient led him to make a visit when he was in a crippled and substantially disabled condition was not sufficient, in and of itself, to show that he was not continuously and wholly disabled. The injury had been sustained. It affected him immediately. The disability attached immediately, and was progressive and continuous. If the insurance did not cover such a condition, it was of little value; and to allow an insurance company to receive large premiums and escape liability in these circumstances would be to sanction the perpetration of a fraud on its policy holders. His failure to make any claim for the first three days, in that he claimed for total disability for three weeks from the 21st only, may have been a waiver of the insurance for that time, and it was some evidence to be considered by the jury on the question of whether his disability was immediate; but he was not estopped thereby from claiming immediate, continuous and total disability, in order to recover the insurance for the period for which he had presented a claim, which was more favorable to the insurance company than the facts warranted.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

August 22.

1 *Case of Splenomedullary Leukemia Successfully Treated by the Use of the Roentgen Ray. Nicholas Senn.
2 *The Management of Cases of Pulmonary Tuberculosis in the Dispensary. James A. Miller.
3 Secret Poisons and Their Uses in Ancient Times. J. W. Wainwright.

4 *Purpura Hemorrhagica Fulminans, with Report of a Case. Henry G. MacAdam.
5 *A Study of a Scarlet Fever Epidemic. Alfred C. Haven.
6 *A Preliminary Report on Some Experiments with the McGraw Elastic Ligature. M. S. Kakels.
7 Poisoning with a Small Dose of Quinin. M. Goltman.
8 Strangulated Oblique Inguinal Hernia in a Child Eleven Days Old; Operation. J. Hutchings White.

1. **Splenomedullary Leukemia Cured by Roentgen Ray.**—Senn states that he has seen many cases of the different varieties of leukemia, but the case which he describes in detail is the only one that has recovered. He attributes this exceptional result entirely to the prolonged use of the *x*-ray. He adds that he has so far not seen a single case of either carcinoma or sarcoma benefited by Roentgen treatment, but the curative power of the *x*-ray in pseudo-leukemia and genuine leukemia promises to accomplish what heretofore has not been obtained by any kind of medication. It seems to prove that, etiologically at least, both conditions are analogous, or at any rate closely allied. The case described was that of a foreign-born Jewess, 29 years of age, with typical splenomedullary leukemia, rebellious to all measures. The case appeared hopeless when, as a last resort, the *x*-ray treatment was commenced, Feb. 3, 1903, about three weeks after her admission to the hospital. The spleen, the lower end of the sternum, and the epiphyseal extremities of the long bones were exposed to the action of the rays daily for from ten to twenty minutes. During the course of the treatment the use of the *x*-ray had to be suspended for a day or two on several occasions owing to a high temperature and other symptoms of intoxication. The constitutional symptoms became very prominent at the time the spleen first presented indications of progressive decrease in its size, about three weeks after the beginning of the treatment. The blood examinations were repeated at intervals of a few days, and it was noticed that improvement kept pace with the reduction in the volume of the spleen. The first decided changes observed were the gradual disappearance of the myelocytes and eosinophiles, and the return of the erythrocytes to their normal shape. Examination of the blood made April 12 showed no myelocytes, and only a very few eosinophiles and very little poikilocytosis. March 12 the patient left the hospital, but was treated daily in the outdoor department. The spleen was so enlarged at first that it simulated a pregnancy at term, but retrogressed to its normal outlines as he shows in a photograph of the patient. He adds that there can be no longer any doubt in regard to the microbic origin of leukemia or to the anti-microbic action of the Roentgen ray. The transillumination of the affected bones undoubtedly accomplished its share in destroying the microbes of the general infective process, as the pain and tenderness disappeared entirely, as well as the occipital headache, during the early part of the treatment. He believes that the microbes of the splenomedullary leukemia are very susceptible to the destructive action of the *x*-ray, as the response to this treatment is very prompt and often violent, followed by a speedy return to normal of the spleen, medullary tissue, and the histologic constituents of the blood.

2. **Management of Pulmonary Tuberculosis in the Dispensary.**—Miller outlines the measures in vogue at the Vanderbilt Clinic, New York, to treat the tuberculous who are unable to go to a sanatorium. Two weeks of absolute rest are enforced, and if there is fever, this rest should be strictly in bed. When they resume work they are instructed to avoid all unnecessary exertion or exercise, to rest at odd moments whenever possible, and to rest absolutely after working hours. The occupation is changed if necessary. When a determined effort is made it is often possible to effect a very fair "rest cure" even while a patient is in active occupation, and perhaps supporting a family. Milk and raw eggs are the main reliance for superalimentation. He gradually accustoms his patients to the ingestion of two or three quarts of milk and from six to ten raw eggs every day, in addition to a regular diet of simple food. The increased expense of such a diet is borne by the patients or by the Charity Organization Society. In medication he prefers to err, if at all, by too little medication rather than by too much. These measures are supplemented by inspection and regulation of the homes, for which the services of a regularly trained nurse are the main reliance. She visits, makes her report, instructs the family and calls the attention of some charitable society to its needs if required. In 35 cases treated on these principles, 22 patients have increased in weight an average of four pounds to a maximum of twelve pounds; 7 of the 22 were early cases, 5 were moderately advanced, and 10 were advanced cases.

4. **Purpura Hemorrhagica Fulminans.**—MacAdam reports what he calls the first case on record of purpura hemorrhagica treated with adrenal gland preparation. The patient was a child of five. In half an hour after the purpura was recognized the child was almost moribund and had vomited several pints of blood. The case looked hopeless. Twenty drops of adrenalin solution were administered internally in a tablespoonful of water. At the end of fifteen minutes the child regained consciousness. A little color appeared in the cheeks and the pulse was perceptible at the wrist. Ten drops of adrenalin were then given and the patient continued to show evidences of improvement. For three days she received ten minims of adrenalin every three hours in orange-juice, no nourishment being permitted. At the present writing, he adds, she eats and sleeps well, apparently none the worse for her narrow escape, and but for a slight anemia, is as well as ever.

5. **The Lake Forest Scarlet-Fever Epidemic.**—Haven states that there were only 2 deaths in the 108 cases reported. The sore throats, which he considered the manifestation of scarlet fever in immunes, were the most prolific source of the spread of the contagion, also the fact that many of the cases were exceedingly mild. Fully one-third of all the cases were young adults, over 15 years old, and no age up to 40 seemed exempt. A house-to-house inspection was instituted. Every case was promptly isolated and the patient not allowed to regain his liberty until all desquamation had ceased, after which the place was fumigated by formaldehyd gas and steam and the disinfector empowered to burn mattresses and whatever else he deemed wise to destroy. A temporary auxiliary hospital was organized for scarlet fever and the hospital ambulance was fumigated each time it was used. No children were allowed on the streets, all visiting and public gatherings were positively forbidden, and special police sworn in to see that all regulations were obeyed. The epidemic vanished more quickly than it appeared, after lasting about ten weeks.

6. **The McGraw Elastic Ligature.**—Walker's conclusions in regard to this elastic ligature, given in THE JOURNAL, xl, p. 166, with five cuts, are confirmed by Kakels' experimental research on a number of dogs. He found it the quickest of all known methods of anastomosis, and states there is no loss of blood except the slight amount produced by the Lembert sutures on the serous surfaces. It is as simple as, if not simpler than the Murphy button, and there is absolutely no escape of intestinal contents, and therefore no exposure to infection of the peritoneum from this source. There is no shock, on account of short exposure and little handling of viscera, and very few lesions are made. There seems to be a uniform coaptation of peritoneal surfaces of the entire circumference of the approximated ends. The bowel seems to have been cut through without sloughing. McGraw states that three or four days is sufficient time to provide for a free opening, but his experience does not confirm this. The cutting through was only partial in 2 dogs killed the third and fourth day after entero-enterostomy, while in 3 gastroenterostomies there was only commencing severance the fifth day. The failure to cut through he attributes to too thin a ligature and to the greater thickness of the dog's stomach and intestine than that of man. For man it would be safer to use a ligature of 3 or 4 mm. thickness, and we should not hesitate to take more than an inch and a half of tissue in the ligature (especially in gastroenterostomies), as the more tissue and the thicker the ligature, the more pressure will be brought to bear and the quicker it will cut through. Barring the disadvantages caused by its slow action in cutting through, he qualifies this ligature as superior to all other methods of intestinal approximation.

Medical News, New York.

August 22.

9 *Cardioptosis. Albert Abrams.
10 Management of Breech Presentations. E. M. Thomas.
11 *Amber Yellow Glass in the Examination and Treatment of Eyes. H. H. Seabrook.
12 *The Treatment of Chronic Catarrhal Deafness (Otitis Media Catarrhalis Chronica). George W. Hopkins.
13 *The Clinical Value of Blood Pressure. H. Richardson.
14 *Tying and Care of the Umbilical Cord. Albert S. Harden.
15 The General Practitioner and His Relation to Early Surgical Operations. E. B. Montgomery.
16 *Other Causes than Syphilis for Paresis. H. Preston Sights.

9. **Cardioptosis.**—Abrams reviews his experience with voluntary cardioptosis, cardioptosis associated with ptoses of the abdominal viscera, the cardioptosis of accommodation, and primary essential cardioptosis. He says of the latter:

It may often be present without subjective symptoms. In other instances a feeling of weight or oppression is experienced in the lower chest which is referred by the patient to the lower sternal region or epigastrium associated with epigastric pulsation and dyspnea. The latter is intensified by exertion. The upper portion of cardiac dulness, superficial and deep, will be found to be lower than normal. The apex beat is with difficulty palpated and, in lieu of the punctated beat, a diffuse one is felt. Auscultation may or may not elicit cardiac murmurs and, if present, they are greatly influenced by posture—a certain posture will bring them in evidence, whereas another posture will cause their evanescence. The murmurs are probably accidental and dependent on the malposition of the heart. The pulse suggests diminished tension of the arterial wall; it is soft, readily compressible and its dicrotic character is clearly brought out in the sphygmogram. The pathognomonic signs of cardioptosis are elicited by skiascopy. The long axis of the heart appears to be practically parallel with the surface of the diaphragm; the boundaries are poorly defined and deep inspiration does not bring into evidence the clearly-defined space between the heart and the diaphragm. This posture of the heart could be assumed if the midriff were abnormally high, as in abdominal distension, yet, if the long axis of the heart were measured, it would be found by describing the distance of the axis on the chest wall, that it would extend higher in the thorax than would a normal heart. The highest anatomic point of the heart is represented by the left auricle, which is at the lower border of the sternal insertion of the second rib, its lowest point is at the upper border of the sixth costal cartilage or in the fifth intercostal space just within the mammary line. Measurement of the long axis of the heart in cardioptosis would show that the heart lies lower than normal. The site of the normal heart is influenced by respiration and attitude. In cardioptosis there is little or no respiratory or attitudinal dislocation.

Treatment is limited to the wearing of a good fitting abdominal support with pressure exerted in the upper abdomen. In cardioptosis associated with Glénard's disease, exercises having for their object strengthening of the abdominal muscles and the diaphragm often yield excellent results associated with massage, faradization and hydrotherapeutic procedures. He has seen no benefit from medication.

11. **Yellow Glass in Examination and Treatment of Eyes.**—Seabrook relates tests with photochromotherapy of the eye, having found that there was less congestion, lacrimation, photobia and pain in examined eyes, when an amber yellow glass lens was used than without it. Vision is not impaired by the yellow glass, chromatic aberration of the eye is corrected by it, and dazzling reflections are softened and modified. The sphincter of the iris is not contracted so much by yellow as white light. The indications for the use of yellow glasses in the treatment of asthenopia and ocular neuralgias are easy to determine. The most beneficial results might perhaps be expected in that class of cases having diminished vision and hyperesthesia of the retina, and he reports three such cases confirming this assumption. His experience with these and other ocular affections shows conclusively that amber yellow glass has certain advantages for the ophthalmologist and good effects on the internal structure of the eye in certain conditions. He uses in examinations a bi-convex lens of white glass split and cemented on a plain glass of medium light amber yellow. For patients he orders amber yellow glasses. He had no experience of their use in "summer conjunctivitis" when he wrote, but believes they will prove particularly soothing in this case, protecting against irritation and improving vision.

12. **Treatment of Chronic Catarrhal Deafness.**—Among other constitutional causes of this condition Hopkins mentions that disordered digestion aggravates and perpetuates a large proportion of cases. Gout is another factor sometimes overlooked, as also typhoid fever. He has lately been experimenting with an electric douche applied to the entire intra-tympanic cavity. The promptness with which relief follows this electrolytic-cataphoric application is sometimes remarkable. He found iodin cataphoresis a valuable adjuvant in certain selected cases, the auditory canal being filled with iodin solution and a cataphoric electrode applied, anode direct to the tympanum. His experience with superheated air has also been favorable. Scores of cases which had obstinately resisted every other form of treatment slowly, but gradually, retrogressed under the application of superheated air to the tympanum until marked improvement in hearing and relief of tinnitus resulted. He believes that the superheated compressed-air treatment, when indicated and judiciously employed, in conjunction with such other measures as may be indicated, will give results which would be utterly unattainable without its aid.

13. **Clinical Value of Blood Pressure.**—Richardson describes the instrument introduced by Hill and Bernard, proclaiming that it is exact and eliminates the personal equation in observation. It consists of a rubber bag connected with a dial graduated in mm. Hg. The bag is securely and tightly fastened around the arm or leg of the patient, and air pumped into the bag till the pressure is sufficient to close the artery; the point of closure being indicated by the cessation of the oscillations of the needle of the aneroid. To obtain the mean pressure, the air is allowed to escape from the bag until the maximum oscillation of the needle occurs, at which point the pressure in the artery and in the bag are the same. It requires very little practice to become familiar with the instrument. There are two pressures in the arterial system which can be estimated by this instrument, viz., the maximum or force of the systole and the mean or the pressure in the artery. As the arteries collapse if empty, it is evident that the force required to obliterate them when full will represent the force of the blood driven into them by the heart. He calls attention to the high mean blood pressure as an important early, diagnostic sign of Bright's disease. It may be determined even before the apex beat has moved to the left. He describes the variations in the blood pressure induced by different affections, as he determined them with this instrument, claiming that from the clinical standpoint, the observation of the maximum and minimum blood-pressures and their relation to one another is of immense advantage, not only as an indication for treatment but also as a measurement of progress.

14. **Care of the Umbilical Cord.**—Harden uses tape and has never seen hemorrhage or laceration of the cord in 500 cases in which it was tied with tape. In 35 cases in which silk was used, he noted 5 cases of laceration and 5 of hemorrhage. After cleansing the region he draws over the cord a piece of sterile gauze, 4x4 inches doubled, with a small slit in the center. He pulls the cord through this by the strings of the ligature and pushes the gauze down on the abdomen, then draws it up over the cord and cuts the ends of the tape. This plain dry dressing can be left untouched until the cord falls off, and does not offer a culture medium for germs as when salves, etc., are used.

16. **Other Causes than Syphilis for Paresis.**—Sights argues that the prevailing cause of paresis is an overworked mind centralizing the mental energies without relaxation, whether in worry over financial troubles or over syphilitic infection or a concentration of the mental forces in any single avenue of life. Mental worry and nervous strain precipitate the disease in susceptible individuals, especially in those who are sensitive, with an inherited pessimistic tendency.

Boston Medical and Surgical Journal.

August 20.

17 Memorial Meeting to Morrill Wyman. Henry P. Walcott and others.
18 *The Surgical Treatment of Gastric Ulcer. John C. Munro.
19 *The Medical Treatment of Gastric Ulcer. Hubert G. Wilbur.

18. **Treatment of Gastric Ulcer.**—Munro pleads for the more intimate association of the internist and the surgeon in the study of gastric ulcer. The physician does not yet fully appreciate that an operation performed on the average patient with a mortality so small that it may practically be disregarded, becomes serious or even unjustifiable if done in the presence of persistent hemorrhage, prolonged sepsis, starvation,

absorption of ptomains, etc. To determine whether there is a condition amenable to medical treatment the physician must experiment to a certain extent. If he succeeds, well and good; if he fails, he must be willing to seek the co-operation of the surgeon, or better, he should have sought it early in order that both should study the case and both should learn, each from the other's findings. The following types he regards as best considered as surgical: probable cases of relapsing acute hemorrhage; cases with hemorrhage if persistent and causing anemia; perforation; recurrent ulcer, pure and simple, attended with dyspepsia and starvation; pyloric obstruction; adhesions following ulcer or independent of it; scar contraction of the body of the stomach, and some cases of intractable dyspepsia, perhaps originating in an ulcer, and for which no definite pathology is known.

19. **Medical Treatment of Gastric Ulcer.**—Wilbur refers in the course of this article to the tendency of anemia to induce gastric ulcer. Experiments on animals have shown that gastric ulcer develops from much slighter irritation and heals more slowly when the animals have been rendered anemic than when the blood is in its normal condition. In chlorotic females it would be wise to regulate the diet to avoid very hot things, coarse foods, highly acid and highly seasoned foods, also avoid corsets and tight clothing. Occupation may have its effect in the causation of ulcer. Seamstresses, typewriters, tailors and clerks, who lean against a machine or desk, are all liable to ulcers. In case of perforation, surgical interference is at once demanded. If the surgeon is not at hand, give morphia subcutaneously to quiet peristalsis and relieve pain, and brandy and coffee by enema to sustain the heart. Hemorrhage occurs in about half the cases. In repeated and profuse hemorrhage Dreschfeld advises turpentine. He gives it in capsules or in emulsion. He cites several cases of hematemesis rebellious to the usual measures, the patients pulseless and blanched, in which the first dose of turpentine arrested the hemorrhage. It is well borne by the stomach.

American Medicine, Philadelphia.

August 22.

20 *Enterostomy, with Report of Cases. J. M. T. Finney and Omar Pancoast.
21 *Enteroptosis: Its Etiology, Symptomatology, Treatment and Prognosis. (Continued.) Thomas R. Brown.
22 *Course of Diseases During Pregnancy. E. Castelli.
23 *Treatment of Typhoid Perforation, with Report of a Case. William C. Voorsanger.
24 *Etiology of Dysmenorrhea. J. Thompson Schell.
25 *A Successful Treatment for Morphinism, with Report of Case. J. Ben. Jones.

20. **Enterostomy for Drainage and Nourishment.**—After the loop of bowel is brought out and opened, a rectal tube is inserted first in one direction and then in the other, for several feet each way. This allows escape of gas and feces with less risk of soiling the peritoneum than by other methods. The special indications for enterostomy considered in the article are: 1, temporary drainage of a distended intestine, allowing it to regain its normal tone in cases of functional paralysis of the bowel of septic or other origin, especially in those cases following appendicitis with peritonitis. 2. To enable one to nourish a patient whose stomach and rectum are for any reason irritable and unable to retain or absorb a sufficient amount of nourishment. The operation of enterostomy, when quickly done under local anesthesia, is a comparatively slight one and causes little disturbance to the patient. The relief afforded thereby often enables him to withstand, later, more radical measures. The amount of fluid that can be given in twenty-four hours by this means and retained is surprisingly large. Finney calls attention not only to the advantages of relieving the distended intestine, but insists that the intestinal fistula once established should be looked on more as a mouth than as an anus. It should be used for irrigation of the intestinal canal, for the nourishment of the patient and for the introduction of catharties. He has often noticed that food introduced into the intestinal canal through the fistula had of itself a stimulating effect on peristalsis. He reports seven cases in detail, some followed by postmortem examination, as the enterostomy was undertaken as a last resort. It always caused great relief and postponed the inevitable fatal termination, and saved several otherwise doomed patients. The fistula usually closes spontaneously.

21. **Enteroptosis.**—Brown describes in this part of his article the symptoms of enteroptosis in general. He says:

> There may be absolutely no symptoms associated with the condition on the one hand, and this is especially so in the acquired cases, while on the other hand we may have symptoms of the most aggravated type of neurasthenia, to which are added various abdominal symptoms due to displacement of the various viscera, such as indigestion, constipation, pain in various portions of the abdomen, a feeling of a lack of abdominal support and many other symptoms.
>
> Among the more important objective symptoms may be mentioned a flattened abdomen, or one flattened in the epigastric region and distended below the level of the umbilicus, sensitiveness to pressure near the tenth rib, a cord-like transverse colon, through which the pulsation of the aorta can be distinctly felt, while in all cases a careful examination of the abdomen reveals the displacement of several of the viscera. Some authors insist that pain and fatigue in the early afternoon and in the very early hours of the morning are important, because these hours correspond in general to periods of duodenal digestion, while in the severe cases many describe marked nervous crises, hysteria, insomnia and despondency.

He discusses the frequency, etiology, symptomatology, treatment and prognosis of enteroptosis, gastroptosis, nephroptosis and hepatoptosis, quoting extensively from international literature.

22. **Course of Diseases During Pregnancy.**—Castelli concludes his paper from the number of March 28, studying diseases of the respiratory apparatus during pregnancy and also diseases of the liver and kidneys. He states that the physician must bear in mind that there is a diminution of hemoglobin in the blood during pregnancy, and with this diminution there is a corresponding lessening of oxidation or respiratory power of the blood and an increase in the carbonic acid discharged by the lungs. In chronic nephritis the death of the child from placental changes is so common that consideration for the life of the child must be always subsidiary to the interests of the mother. He believes that the danger to the mother increases and the hope of giving birth to a living child diminishes, the earlier the lesion of the kidney manifests itself in pregnancy. If nephritis is shown in the earlier period of pregnancy, the chances of recovery and of a living child are problematic, while if the pregnancy is stopped in time, the recovery of the mother is certain. He advises intervention between the fifth and sixth months. Waiting, while of no advantage to the fetus, may prove a great danger to the mother. In regard to tuberculosis he remarks that athrepsia, as a rule, is produced by the tuberculous mother, whose infection was not sufficient to kill the fetus in intrauterine life.

23. **Typhoid Perforation.**—Voorsanger lays stress on the white blood count in the diagnosis of typhoid, attaching as much, if not more, importance to it than to the Widal reaction. The leukopenia occurs during the first few days, and is always very positive, being, as a general rule, between 3,000 and 5,000. A rise always means a complication. In the case of perforation described the only symptoms were the dropping temperature, the high pulse and tympanites.

24. **Etiology of Dysmenorrhea.**—Schell emphasizes that the origin of dysmenorrhea may be local or pelvic, general or constitutional, or merely reflex, or it may be due to a combination of two or more of these causes.

25. **Hyoscin Treatment of Morphinism.**—Jones reports the particulars of a case treated with wonderful success according to the method advocated by Dr. Geo. E. Pettey. His principle is that morphinism is due to autotoxemia, and the chief cause of the phenomena known as withdrawal symptoms is the presence of this toxic matter in the system and not the drug itself. When the system is cleansed of the accumulated effete material, autotoxemia overcome, and the portal system disengorged, morphin can be at once withdrawn without shock, collapse, or danger to life, and the suffering subsides in a few days. He gives purgatives, hyoscin and strychnin and sodium hyposulphite. Jones also witnessed ten other patients thus treated. There was no appearance of collapse, heart failure or other untoward symptom in any case, and there was an entire absence of the nervous symptoms usually encountered. The patients slept almost normally from the very beginning of

treatment. The details of Pettey's method were published in THE JOURNAL recently, xl, p. 1757.

New York Medical Journal.

August 22.

26 *Relation of the Anesthetist to the Patient and to the Surgeon; with Some Interesting Experiences, on which This Paper is Partly Based. S. Ormond Goldan.
27 *The Iodin Treatment of Puerperal Sepsis. W. R. Pryor.
28 *The Treatment of Papilloma of the Larynx in Children. J. E. Summers, Jr.
29 Regicides; Sane and Insane. (Continued.) E. C. Spitzka.
30 The Treatment of the Summer Diarrhea of Children. W. C. Rucker.

26. **Relation of Anesthetist to the Patient and to the Surgeon.**—Goldan pleads for complete equality ethically, professionally, materially, between the anesthetist and the surgeon. Many surgeons, he thinks, lose sight of the fact that the anesthetist, both by education and training, is their professional equal, and he relates a number of incidents from his own experience which show the abuses that still prevail in many quarters. The only right for their existence is usage and the non-assertion of the anesthetist. Through the ignorance of the patient and many years of bad custom the surgeon assumes charge of the entire operation instead of informing the patient that he operates and others anesthetize. The anesthetist owes it to the patient and to himself that he should examine the patient before the operation. He is liable to discover valuable points in regard to the anesthesia by this examination, and the relation of the anesthetist to the patient being thus direct, he receives what he is justly entitled to and no more—the full credit for his own work and a fee accordingly. The highest medical standard, he argues, allows that the medical man is entitled to a maximum fee in every case treated. In many instances this would be a burden to the patient and, knowing this, the practitioner follows the beneficent plan of charging in keeping with the financial circumstances of his patient. In a word, he does not overcharge the rich, but he undercharges the poor. The operator, in case of a particularly important patient, labors under a greater responsibility, and he charges accordingly. The same should, and must, obtain with the anesthetist, and the signs indicate, Goldan believes, that this equality between the two is becoming recognized. In his experience the patients do not object to remunerating the anesthetist directly. When requested to send in his account to the operator he does so only as a matter of courtesy, and sees no reason why the charge should be less than if sent directly to the patient.

27. **Iodin Treatment of Puerperal Sepsis.**—Pryor found streptococci in the uterine cavity in 36 out of 37 cases examined and in the entire number these cocci were found in the serum, lymph or free pus in the posterior cul-de-sac. He is convinced that this corroborates his assumption that puerperal sepsis is the result of a streptococcic puerperal septic lymphangitis. Treatment should be along the lines of sterilization of the original lesions, and inducing absorption by the infected lymphatics of some potent, harmless antiseptic, supplemented by measures to promote the eliminative functions. He used to curette the infected uterus and open up the cul-de-sac, concluding by packing them both with an abundance of iodoform gauze "in order to drain away something." He found, however, that there was nothing to drain away except serum, and yet the cases recovered beautifully. He had builded better than he knew, and later researches have demonstrated that the fine results attained were due to absorption from the gauze. The iodoform gives up its iodin, partly in obedience to the influence of heat and partly from the chemical action of the blood serum. Local iodism is produced, and this sterilizes the pelvis, while the iodin absorbed by the lymphatics appears in the urine in an average of five hours, sometimes as early as two, showing that it has a systemic effect as well. He accompanies this massive gauze packing with saline per rectum or intravenously to facilitate the elimination of the iodin and of toxins by the kidneys. He has thus treated 37 cases; 27 had not previously been operated on, and only 1 died, while 10 had been curetted before coming into his hands and 3 died. He is now engaged on research to determine whether this local and general iodin sterilization may not be obtained through the infected lymphatics in some still simpler manner.

28. **Treatment of Papilloma of Larynx in Children.**—Summers lauds tracheotomy as the most available remedy for this condition. Intubation is a failure and the justifiability of laryngotomy is questionable. The general practitioner, he thinks, can make the diagnosis and the services of a specialist are not required.

Cincinnati Lancet-Clinic.

August 22.

31 *Eye Strain and Its Results. S. C. Ayres.
32 Eye Strain from the Standpoint of the Physician. E. W. Mitchell.
33 Eye Strain from the Standpoint of the Neurologist. Philip Zenner.
34 Surgery of Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) B. Merrill Ricketts.

31. **Eye Strain and Its Results.**—Ayres relates several pointed illustrations showing the physical effects possible from eye strain. One patient, a lad of 15, suffered invariably from nausea in a crowded room or on attempting to study. Another, a child of 6, suffered daily from nausea, which came on while playing and subsided when he reposed. As he did not use his eyes for reading, the influence of school life was not a factor. In another case severe choreic symptoms entirely disappeared under correction. A fourth patient was a woman of 33 who had suffered from nausea, headache and dyspepsia and had been treated for stomach trouble for five years. The relief by the adjustment of glasses was immediate and permanent. All the patients were cured of these symptoms by proper correction. Decided improvement was likewise obtained in a child of 7 presenting ametropia, muscular unbalance, nervousness and mild choreic symptoms.

St. Louis Medical Review.

August 22.

35 Diphtheria and Its Treatment. George D. Lynch.

Northwestern Lancet, Minneapolis.

August 1.

36 *Bullet Wounds in Modern Warfare. Arthur A. Law.
37 The Relation of the Medical Profession to the Enactment of Legislation on Questions of Public Health. Richard O. Beard.
38 The Function of a City Hospital. H. M. Bracken.

August 15.

39 Commercialism and the Code. J. F. Bond.
40 Enterectomy for Gangrene from Strangulated Hernia. G. R. Curran.
41 Report of a Case of Eclampsia. William F. Wilson.
42 Asepsis of the Cord. Harry Morell.
43 Pneumonia. Victor I. Miller.

36. **Bullet Wounds.**—From a study of modern high velocity military bullets, Law advises to refrain from meddlesome treatment of the wounds. Dressings should be less frequently changed on the field for fear of infection. He also notices the peculiar lack of susceptibility of the blood vessels to wounds, and the rarity of external primary hemorrhage. Lodgment of the projectile is relatively frequent, on account of the range of fire, but attempts at removal should be abstained from unless it causes trouble. Primary amputations are rarely necessary except with shell wounds or great infection. Fracture cases do as well as those in civil practice. Infection from the undeformed bullet is rare. Head wounds are among the most fatal class of cases and require most frequently operative interference. Joint wounds are among the most favorable class, and generally leave perfect function. Thoracic wounds, unless immediately fatal, recover with few complications. Tetanus and gangrene are exceptional. Abdominal perforating wounds constitute the most serious class and should not be operated on. He considers the high velocity steel-jacketed projectile as a step towards the end of all wars. It disables the enemy with the minimum of death, suffering and maiming, and impairs the subject less for future life after his return home.

American Journal of the Medical Sciences, Philadelphia.

August.

44 *Chronic Cyanosis, with Polycythemia and Enlarged Spleen: A New Clinical Entity. William Osler.
45 *An Aspect of Modern Pathology. Simon Flexner.
46 *Concerning a Possible Etiologic Factor in Tobacco-alcohol Amblyopia Revealed by an Analysis of the Urine of Cases of This Character. G. E. de Schweinitz and David L. Edsall.

47 Sitophobia, Inanition and Their Treatment. Max Einhorn.
48 *Bacteriology of the Blood. Randle C. Rosenberger.
49 *Sublingual Growth in Infants. Samuel Amberg.
50 Primary Retroperitoneal Sarcoma. Howard J. Williams.
51 *The Constitution of Normal Prostatic Secretion. Heinrich Stern.
52 *Rheumatism vs. Muscular and Joint Pains. James J. Walsh.
53 *Orthostatis Albuminuria and Movable Kidney. G. A. Sutherland.
54 *Cold as a Causal Factor in the Blood Changes Due to High Altitude. John Weinzirl.
55 Observations on a Case of Diabetes Terminating in Coma. Stuart Hart and William J. Gies.
56 A Case of Diaphragmatic Hernia: Death from Acute Distension. T. L. Chadbourne.
57 A Case of Mycosis Fungoides Symptomatically Cured by Means of X-Rays. James P. Marsh.
58 Report of Cases of Poisoning by Fruit of Ricinus Communis. W. N. Bispham.

44. **Chronic Cyanosis with Polycythemia and Enlarged Spleen.**—Osler describes a group of cases which has been elsewhere noticed by him as a new clinical entity. (See editorial, THE JOURNAL, May 23, 1903, page 1442.) He reports several other cases from the literature, and gives them a thorough analysis. He says with our imperfect knowledge of the physiology of polycythemia it would be premature to discuss at any length the pathology of this remarkable group of cases. What is needed is:

1. A careful study of all forms of chronic cyanosis with polycythemia, particularly those associated with heart disease and emphysema. (It is to be noted that the cases here reported have the highest blood count on record, much higher than the average in congenital heart disease or in dwellers at great altitudes.) 2. A more accurate study of the blood in this class of cases—the volume, the viscosity, the state of the plasma and the serum, the amount of hemoglobin, the specific gravity, and the diameter of the corpuscles. As increased viscosity of the blood, with resulting difficulty of flow, seems the most plausible explanation of cyanosis, it is especially important to test the viscosity by accurate physical methods and to determine the relation of the number of corpuscles to the viscosity of the blood. 3. The relation of the splenomegaly to the cyanosis and polyglobulism should be carefully observed. It man not be anything more than the effect of the chronic passive congestion. Future investigations will determine whether we have here in reality a new disease. The clinical picture is certainly very distinctive; the symptoms, however, are somewhat indefinite and the pathology quite obscure.

45. **Cytolysins, Autolysins, Etc.**—Flexner's article discusses the properties of blood serum, the study of agglutination, its relation to thrombosis, the presence of a special substance in certain venoms and poisons, such as some snake venoms and ricin, for which he proposes the name of "hemorrhagin" and looks on it as a cytolysin for endothelial cells and blood vessels. He refers to experiments by Noguchi and himself in modifying viper venom to remove the locally destructive effect and still leave the hemorrhagic principle by which immunity may be established. He next takes up the cytotoxins of blood serum, discussing them at length and also the autolysis of the organism, which he believes should be largely credited to the leucocytes.

46. **Alcoholic Amblyopia.**—Seven cases are reported by de Schweinitz and Edsall, which seem to them to point to the probability of the correctness of Horner's view that the amblyopia is due to toxemia set up by gastric indigestion and metabolism.

48. **Bacteriology of the Blood.**—After a review of the literature and a report of personal observations, Rosenberger says that bacteriologic examinations of the blood in the living may afford valuable information for diagnosis and intelligent treatment. This is particularly true in cases where antitoxic and bacteriologic sera are indicated. Special care as to technic is a pre-requisite; special media should be used in certain cases, as in gonococcal infection, etc. Postmortem examination of the blood should not be relied on to determine the nature of the infection as the results are often misleading and untrustworthy. In enteric fever in 535 cases the typhoid bacillus was shown to be present in the blood in over 80 per cent. Schottmüller's plea that all cases of enteric fever should be regarded as bacteriemias seems justifiable, as observers agree that bacteria can be found in the blood before a positive Widal reaction. This fact would seem to place this procedure as a diagnostic method in advance of the other and also seems to prove that the disease is often, if not always, a blood infection. He also considers that proper identification of the bacteria present in septic processes would reconcile discordant views as to the therapeutic efficacy of the antistreptococcic sera. He thinks there is also a possible future for bacteriologic examination of the blood as an aid in the diagnosis of tuberculosis and syphilis.

49. **Sublingual Growths in Infants.**—The first case apparently reported in an American in this country is detailed by Amberg, who discusses the condition, which has been observed in Southern Italy under the name of Riga's disease. The growth under the tongue is undoubtedly a product of an inflammatory process. Its etiology, however, is obscure; the bad hygienic conditions of the mouth may be of importance. The idea, however, that the sublingual growth is an integral part of a definite serious disease does not seem well supported. It is likely that not all affections of the frenulum included under this head are of uniform pathologic character. The diagnosis is easy and the prognosis generally favorable.

51. **The Prostatic Secretion.**—Stern gives a careful analysis of the prostatic secretion, including a special enzyme which has been discovered in it, and shows that it is as yet impossible to single out the specific importance of the prostatic fluid. Possibly it is due to its enzyme exhibiting coagulating properties; maybe to the phosphorus containing lecithin or maybe to some of the nucleoproteids whose importance has still to be determined or to a combined action of any or all of them or to some other factor altogether. There is no doubt, however, as to its physical importance as a vehicle for suspension and the preservation of the spermatozoa. The secretions, however, of other organs, of course, assist, and he thinks it will not be far from the truth in assuming that apart from an eventual specific chemico-enzymic potency, the secretion of the prostate gland is of importance in overcoming the quiescence of the spermatozoa, and in effecting that state of osmosis in the seminal fluid which is essential to fecundation.

52. **Rheumatism vs. Muscular and Joint Fatigue.**—Walsh points out that many cases diagnosed as rheumatism are really cases of muscular fatigue, and shows how this may occur in scoliosis and in hysterical and tubercular joints and in the lungs where the pains are likely to be considered pleuritic. The matter is of importance since the use of depressing antirheumatic remedies is contraindicated in these cases. The treatment of the latter group consists not in the use of analgesics, especially the coal-tar products, but of gentle rubbing and massage and of limitation of exercise of the patient so as to prevent the overuse of respiratory muscles that is sure to be called for if, with one lung practically at rest, the patient attempts any of the ordinary efforts that before were so easy of accomplishment. Resting the parts and tonic treatment are almost always of benefit in all these cases, or exercises to equalize the strength of the muscles.

53. **Orthostatic Albuminuria.**—This condition, which has been described as cyclic albuminuria, albuminuria of adolescence, etc., is discussed in its relation with movable kidney by Sutherland, who reports 15 cases. All of them, he thinks, occurred in patients with a lowered vascular tone and probably venous congestion in the kidneys, altered nutrition and glomerules producing albuminuria. Displacement of the kidney aids the process and the cessation of albuminuria in the reclining posture is best explained by the restoration of the kidney to normal position in this attitude. He mentions that he has met with more cases of movable kidney among forty cases of orthostatic albuminuria than among all the other patients examined at a children's service during fifteen years (15 in 40 cases).

54. **Cold and Blood Changes.**—Weinzirl some time before called attention to the fact that the increased counts of red corpuscles at high altitudes are temporary, and suggests that the temperature may have much to do in their production. He reports experiments on rabbits taken out of a warm basement and carried to a cold temperature and their blood examined. He offers in conclusion the following:

1. Cold is an important factor in accounting for the blood changes due to high altitude. That cold is the only factor, however, is not maintained. 2. In general the specific gravity, the hemoglobin, and the volume of cells follow the increase or decrease of the red blood cells, although this is not invariably the case. 3. Although the data are too few for a final conclusion, there is no evidence that

a decrease in the size of the cells accompanies an increased cell count. The contrary, however, is indicated, and this factor probably varies directly with the others.

Medicine, Detroit.

August.

59 Adenoma and Angioma of the Kidney and Some Allied Tumors. W. Ramsay Smith.
60 *An Attempt to Obtain a Uniformly Active, Sterile and Non-Irritating Preparation of Digitalis for Subcutaneous and Internal Administration. E. M. Houghton.
61 Case of Perforating Ulcer of the Duodenum; Operation Thirty-two Hours After Perforation; Death from Peritonitis. Bayard Holmes.
62 A Case of Amebic Dysentery in Illinois, with Special Reference to Acetozone Treatment. Russell L. Kurtz.
63 Congenital Sincipital Encephalocele. Mortimer Frank.

60. **Digitalis.**—Houghton describes the experiments made in testing a new non-alcoholic digitalis preparation, for which he claims the following advantages: It does not produce pain or irritation at the point of injection. It is readily absorbed and produces typical digitalis action when given per rectum, internally, hypodermically or intravenously. It is aseptic and remains so if the container is kept stoppered, and is convenient and ready for immediate use, either internally or hypodermically, without dilution. The paper gives illustrations and tables of the experiments.

Journal of Nervous and Mental Disease, New York.

August.

64 *Myoclonus Multiplex and the Myoclonias: Report of Cases and an Attempt at Classification. Charles L. Dana.
65 Chronic Progressive Hemiplegia, with Remarks on Two Cases of Unilateral Paralysis Agitans without Tremor. Hugh T. Patrick.
66 The Work of a Neurological Dispensary Clinic. Smith Ely Jelliffe and L. Pierce Clark.

64. **Myoclonus Multiplex.**—Dana groups myoclonus under the head of:

1. Myoclonia of Friedreich, or peripheral type, including myokymia. 2. Myoclonia of the functional or hysterical type. 3. Myoclonia of the convulsive tic type, this last type being characterized by many associated spasms, choreic and tonic. 4. Myoclonia of the degenerative chorea or "familial," or myoclonus-epilepsy type, which is closely related with the third. 5. Myoclonia of the type of the infectious and symptomatic choreas. Although there is sometimes a mixture or fusing of the above groups, they are essentially different disorders and, as a rule, can all be easily recognized and easily distinguished from each other. All cases of paramyoclonus multiplex reported as such can be grouped in one or the other. Hence there is no need of that much misused term.

Four cases are described representing each of these types. He reproduces the account of the original case of paramyoclonus multiplex of Friedreich.

Journal of the Michigan State Medical Society, Detroit.

August.

67 The Surgeon: His Opportunities and Responsibilities. Frederick W. Robbins.
68 Fibromata as Complications of Pregnancy. Reuben Peterson.
69 Obstetrics in General Practice. F. A. Grawn.
70 *Excision of Hemorrhoids. William L. Dickinson.
71 Prevention of Gynecic Evils. J. A. Porter.
72 Bilateral Cystic Disease of the Kidneys. H. E. Randall.

70 **Hemorrhoids.**—Dickinson's method of treating hemorrhoids is, in the case of external piles, to make them as nearly aseptic as possible and then to inject a 5 per cent. solution of nirvanin. Then grasping with the forceps, the hemorrhoid is elevated well up and with scissors curved on the flat, the tumor is cut off close to its base. The base is curetted in order to remove every vestige of the hemorrhoid. The hemorrhage is usually slight and controlled by pressure; if not, hemostatic forceps can be used for a few minutes. When it has stopped, the two sides of the incision can be united with fine catgut, dusted with iodoform and a sterile gauze pad applied and held in place by a T-bandage. It is well to keep the patient recumbent for a few days until the parts are healed. In case of internal hemorrhoids, he operates by dilating the sphincter and applying four Platt's T-forceps, pulling down and outwards with the aid of two assistants, exposing the mucous membrane of the bowel for the distance of an inch or an inch and a half. Each internal hemorrhoid in turn is grasped by forceps, elevated as much as possible and cut off with the scissors, curved on the flat, the long diameter of the incision longitudinal to the bowel. The base of each hemorrhoid is curetted and the hemorrhage stopped with a hot water compress; then dust the parts with orthoform, iodoform and boracic acid. The T-forceps are removed and the lower end of the rectum is packed with a strip of iodoform gauze, two inches wide and two or three yards in length, which has been lubricated with sterile vaselin. The latter makes it easier to remove. It should be removed in twenty-four hours if the patient complains, but as a rule not until after forty-eight hours. When it is removed, hydrogen dioxid should be injected, thus loosening the gauze, and a stream of warm sterile water is allowed to flow over the part. The rectum is daily irrigated with sterile warm water and then injected with half an ounce of olive oil, containing five grains of iodoform. The patient's bowels are moved on the third day by magnesium sulphate. It is not necessary to suture internal hemorrhoids, and when treated in this way they are not very painful. The patient is confined to bed only about a week. The pad and T-bandage are used and make it more comfortable for the patient. He has never had a case of secondary hemorrhage when operating by this method.

The Physician and Surgeon, Detroit and Ann Arbor.

May.

73 *The Choice of Methods in the Treatment of Cancer. G. Betton Massey.
74 *The Necessary Co-operation of Heredity and Bacteriology in the Production of Disease. Owen C. Brown.
75 *The Climatologic Treatment of Tuberculosis. Ethan H. Smith.
75½ Daily Study of Foods Producing or Not Producing Casts, Fatty Epithelia and Albumin in Urine. (Continued.) Ephraim Cutter.

73. **Cancer.**—Massey claims that the massive cataphoric diffusion of mercury under general anesthesia is the most satisfactory way of reducing an accessible growth. The nascent oxychlorids of mercury and zinc are dissolved from electrodes thrust within the growth, causing immediate, sterile necrosis of the growth proper, and sufficient dispersion of the germicidal salts beyond its apparent limits to sterilize the surrounding tissues for an inch or more. All the morbid cells are killed *in situ*, those in the growth coming away as an inodorous slough, while the cells in the surrounding sterilized zone are absorbed as débris. When it is understood that this can all be done in one-half to two hours with practically no after discomfort, he considers we have in it an ideal method for the eradication of the cancer. The choice between this method and the *x*-ray is important in inoperable cases. As a general rule, he thinks the combination of the two methods is desirable, the cataphoresis first, followed by the *x*-ray as soon as the slough comes away, which is in one to three weeks. The destruction and aseptic removal of the growth enables the deeper penetration of the *x*-rays, and prevents the absorption of toxins during the radiation of large growths. In inaccessible cancers, such as those in the nose, mouth, vagina, uterus or rectum, the cataphoric method will have to be depended on alone as a rule.

74. **Heredity and Bacteriology.**—The object of Brown's paper is to show the co-operation of heredity and bacteriology in the production of disease. He assumes a double tendency in all living beings to variation on the one hand and to conservatism on the other, the latter being what we know as heredity. These tendencies apply equally to disease. They may be dormant in the system for generations. Certain attributes, developments and diseases common to both sexes and certain functions may be arrested by the development of functions peculiar to each sex. They may reappear in the offspring, or be reawakened when the functions of development that had arrested their growth have discontinued their activity. Diseases following developments of structure caused by increased functional activity are as readily transmitted as such increased structural developments. Bacteriology is concerned with environment; bacteria can not be the sole producers of disease. Heredity and bacteriology are mutually dependent and must co-operate if they are to become active in the production of disease.

75. **Tuberculosis.**—Smith criticises the various climates of the mountainous regions of the west, holding that the altitude in some is too high, while others are too dusty and liable to excessive range of temperature, storms, etc. In Arizona, for example, the conditions are poor for a large class of cases. In California, he thinks the climate has a large range. Some

parts are good for one class and others for others. Many patients receive benefit from traveling with a camp wagon from north to south, and *vice versa*, according to the season. He has known, however, of pulmonary tuberculosis patients going to Alaska and returning well. In all these cases the patients had a good digestion. Where the digestion is impaired the case is hopeless. He insists in conclusion on the importance of fresh air and open-air life. The latter, in tents, is possible for almost any tuberculous patient the year around.

American Gynecology, Baltimore.

July.

76 *Uretero-cystostomy. J. Wesley Bovée.
77 *Indications for and Most Satisfactory Methods of Bringing About Premature Labor and Accouchement Forcé. J. Whitridge Williams.
78 *Should the Uterus Be Removed When the Ovaries and Tubes Are Removed in Cases of Double Pyosalpinx, When Operating Through the Abdomen? Matthew D. Mann.
79 *An Operation for Retroversion; Cuneiform Shortening of the Broad Ligaments. Harris A. Slocum.
80 *The Condition of the Pelvic Lymphatics in Carcinoma of Uterus. Emil Ries.
81 The Electrothermic Angiotribe in the Removal of a Large Suppurative Tubo-ovarian Mass, with Resection of Four Inches of Colon and End-to-end Anastomosis. Andrew J. Downes and J. M. Fisher.
82 *Should the Uterus Be Removed When the Ovaries and Tubes Are Removed in Cases of Double Pyosalpinx, When Operating Either Through the Abdomen or Vagina? Charles P. Noble.

76.—See abstract in THE JOURNAL, xl, p. 1597.

77. **Accouchement Force.**—Williams would not employ premature delivery in cases of deformed pelves, but would rather let them go to term and then, if necessary, perform cesarean section as safer both for the mother and child. In cases of toxemia of pregnancy, eclampsia and placenta previa he considers accouchement forcé indicated, and in eclampsia it is imperatively demanded both theoretically and by practical experience. His experience with eclampsia numbered 30 cases, and the conclusions are briefly summarized as follows:

> If the cervix will admit one finger or can be readily dilated sufficiently to do so, accouchement forcé by Harris' method, using the fingers, is a safe and justifiable procedure, if effected slowly. If the cervix is cartilaginous in consistency and apparently offers an insuperable obstacle, it would be more conservative in hospital practice to resort to cesarean section, while in private practice better results will be obtained by palliative treatment rather than by attempting immediate delivery.

In the toxemia of pregnancy he has had to resort to the method in 13 cases, and concludes that in such the pregnancy should, if possible, be terminated by the employment of the bougie or Champetier de Ribes' bag, accouchement forcé being reserved for the very exceptional cases in which danger of the onset of eclampsia is so imminent that very rapid delivery is urgently indicated. In placenta previa he thinks if the child is viable and in good condition and the parents are particularly desirous of saving it, Champetier de Ribes' balloon may be introduced and complete dilatation of the cervix obtained by making traction on it either by means of the hand or a weight. However, this is slightly more dangerous to the mother than bipolar version. In 34 cases accouchement forcé was undertaken for the sake of the child or mother in patients who were already in labor, the indications being hydramnios, pyelonephrosis, intense cystitis, one each, danger to the fetus as shown by sudden change in the pulse rate, or prolapse of the cord in 7 cases, and in 24 very prolonged labor as manifested by exhaustion and marked and persistent elevation in maternal pulse rate or fever. All of the mothers recovered while 28 per cent. of the children perished. He thinks after labor has set in, excepting in cases of placenta previa, accouchement forcé may be undertaken with comparative impunity whenever imperatively necessary. Only 3 deaths occurred in his 87 cases that might be attributed to the operation. Two of these were due to rupture of the uterus, 1 from infection, and there were 7 others where deep tears of the cervix required an immediate operation to control the hemorrhage. He does not believe in the Bossi method of dilatation excepting in very experienced hands, and with Harris' method he cautions against going too fast, as is the tendency. Better results will be obtained by prolonging the operation.

78. **Hysterectomy.**—The question whether the uterus should be removed with the tubes and ovaries is treated of by Mann, who thinks that when the tubes and ovaries have been removed the uterus is unimportant to the patient and she is better off without it. He does not think there is much sentimental feeling in regard to its removal. He ends with quoting Henrotin's dictum: "In any operation for septic conditions of the female generative organs which demand the removal of the tubes and ovaries, hysterectomy should also be performed unless there are contraindications forbidding it."

79. **Shortening of the Round Ligaments.**—The title of this article explains itself, but the details can best be understood by reference to the illustrations. Various methods, such as taking out a wedge-shaped piece from the broad ligaments, buttonholing them, etc., are fully illustrated, there being many modifications according to the needs of the case. He, however, suggests for the whole class of cases the title "Cuneiform shortening of the broad ligaments."

80. **Pelvic Lymphatics.**—Ries proposed the removal of the pelvic lymphatics in case of cervical carcinoma as early as 1895, and has employed the procedure since that time. He finds a number of conditions associated with carcinoma in these glands, and describes the various stages of their invasion by malignant growth. Glandular carcinoma is frequently associated with other conditions, not necessarily always connected with carcinoma, such as the production of epithelial ducts in the lymphatic gland, which he described in his first case operated on. He thinks they may possibly be due to remnants of the Wolffian body embedded in the lymphatics on the posterior pelvic wall. Another condition observed was large cell hyperplasia, which may also occur in tuberculosis, and even in other conditions. He thinks it represents a condition of growth with the nature of which we are not thoroughly familiar. He has also found hyaline degeneration of the connective tissue trabeculæ associated or otherwise with carcinoma, and has frequently found typical hemolymph glands. He believes in the reformation of lymph glands after they have been destroyed or removed, and that they may occur anywhere in the connective tissue. The hemolymph glands, with their direct connection with the blood currents, afford a new explanation of how carcinoma may form metastases.

82. **Hysterectomy.**—Noble's opinion in regard to the removal of the uterus in case of pus tubes is similar to that of Mann. He points out the superiority of the operation over removal of the uterine appendages alone.

Medical Review of Reviews, New York.

July 25.

83 *A Clinical and Bacteriologic Study of a Number of Outbreaks of Dysentery in which "Dysentery Bacilli" Were Found. William H. Park, Edward K. Dunham and H. M. Carey.

83. **Dysentery.**—Park, Dunham and Carey give the results of their study of the dysentery bacillus, from which they have deduced the following conclusions: At least two distinct varieties of bacilli are found in the intestines of those suffering from dysentery and colitis which have not as yet been met with in other conditions. They differ from each other in certain cultural characteristics (indol formation and mannite fermentation), and also in their agglutinating reaction. Different cultures made at widely separated places, though agreeing in their agglutinating reaction with most sera, still differ from each other when tried with various normal animal sera. Though Martini and Lentz are right in their statement that the Shiga type differs from Flexner's Manila Baltimore type in cultures and agglutinative reaction, yet they seem to be altogether wrong in concluding that any one type is more a factor in dysentery than the other. Indeed, the Deycke bacilli from Constantinople dysentery, which approached the colon type in cultural characteristics, can not be overlooked. The authors think it probable that Shiga, if he carries his cultural and agglutinative tests as far as necessary, will find that not one but several varieties are present in the intestines of different and perhaps the same patients in Japan as well as in the United States. The use of more accurate agglutinative tests along with additional culture media has shown that in different epidemics the bacilli found vary so greatly from the

Shiga cultures that it can hardly be determined whether or not it can be brought within one single dysentery group.

Canada Lancet, Toronto.

August.

84 *Surgical Treatment of Nephritis. Alexander H. Ferguson.
85 *The Washing Out Plan; the Good It Fails to Do; the Harm It Does. Alexander Haig.
86 Rational vs. Empirical Therapeutics. J. O. Todd.
87 The Medical Witness Under Examination. W. R. Riddell.
88 Appendicitis from the Standpoint of the Country Doctor. John W. S. McCullough.
89 Contagious Diseases in Their Economic Relationships. P. H. Bryce.

84.—This article appeared in THE JOURNAL of July 4, p. 8.

85. The **Washing-Out Plan.**—Haig protests against the adoption of the washing-out plan in nephritis and other conditions, especially those of uric acid disease. He thinks in Bright's disease the better treatment is the cutting off of all fluids, putting the patient on even as little as a half pint of fluid in twenty-four hours. He calls the idea of washing out the system silly and unphysiologic.

Proceedings of the Pathological Society, Philadelphia.

June.

90 A Museum Jar, with Improved Devices for Sealing and Labeling. W. M. L. Coplin.
91 Cystic Degeneration of the Mamma, Showing Transformation into Scirrhous Carcinoma. A. G. Ellis.
92 Hemorrhagic Gastritis Due to Pyloric Lodgement of Swallowed Laryngeal Pseudomembrane. A. G. Ellis.
93 Heart Showing Chronic Tuberculosis of the Pericardium, with Involvement of the Myocardium. A. G. Ellis.
94 A Series of Specimens: Adrenals Containing Cells Resembling Those of the Liver, etc. Randle C. Rosenberger.
95 Ovarian Dermoid Containing Thyroid-gland Tissue. Brooke M. Anspach.
96 History and Postmortem Notes from a Case of Gallstones. M. H. Fussell.

Denver Medical Times.

August.

97 The Animal Suture; Its Value in Aseptic Surgery. Henry O. Marcy.
98 Three Cases of Nerve Destruction in the Eye Treated by Hypodermic Injections of Strychnia. Henry La Motte.

Medical Herald, St. Joseph, Mo.

August.

99 Code of Ethics, A. M. A., Adopted at the New Orleans Meeting.
100 Raising the Standard for Medical Students and Physicians. W. S. Thompson.
101 Treatment of Diarrhea of Adults. George H. Candler.
102 Diagnosis of Diastolic Heart Sound. LeRoy Crummer.
103 The Diagnosis of Gallstones. A. L. Wright.
104 Report of Uses of X-Ray in Chronic Eczema, Acne, Cancer, etc. W. L. Kenney.

Medical and Surgical Monitor, Indianapolis, Ind.

August 15.

105 Cesarean Section on a Dwarf Four Feet Two Inches in Height. W. H. Link.
106 Consumption and Its Relation to Life Insurance. Allison Maxwell.
107 *Excision of Hemorrhoids. William L. Dickinson.
108 A Case of Noma Complicating Typhoid Fever. A. H. Caffee.
109 Treatment of Acute Dysentery. W. Byford Ryan.
110 A Practical Note on the Use of Adrenalin Chlorid in Operations for Adenoids. J. F. Barnhill.
111 Hemorrhage of Typhoid Fever Treated by Calcium Chlorid. Samuel E. Earp.

107.—This article has appeared elsewhere. See abstract 70 above.

International Medical Magazine, New York.

August.

112 Some Cases of Infant Feeding. Alfred Hand, Jr.
113 Treatment of Epilepsy. Luther C. Peter.
114 Disturbances of the Vasomotor Mechanism as a Factor in Diagnosis and Therapeutics. John P. Arnold.
115 Treatment of Eczema. George P. Katzenstein.
116 Rupture of an Aneurism of the Thoracic Aorta. M. H. Fussell.
117 A Case of Cerebral Abscess. George C. Stout and Herbert Fox.
118 Note on the Place of Sugar in the Diet of Dyspeptics. Boardman Reed.

Merck's Archives, New York.

August.

119 The Rôle of Lecithin in Pathology and Therapeutics. Horatio C. Wood, Jr.
120 Rhus Toxicodendron and Rhus Poisoning. (Continued.) J. M. French.
121 An Index of Diseases Alphabetically Arranged, with Their Modern Treatment. G. Bjorkman.

Louisville Monthly Journal of Medicine and Surgery.

August.

122 Digitalis. John G. Cecil.
123 Cardiac Tonics; Indications and Contraindications, with Special Reference to Digitalis. Thomas Hunt Stucky.
124 Some Uses of the Suprarenal Extract in Eye, Ear and Throat Practice. Samuel G. Dabney.
125 A Rapid Method of Blood Examination for the General Practitioner. F. H. Montgomery.
126 The Significance of Albuminuria. Orville A. Kennedy.

Medical Summary, Philadelphia.

August.

127 Treatment of Sunstroke. L. G. Doane.
128 Fistula. George J. Monroe.
129 Dysentery. J. A. Burnett.
130 A Report of Cases (Sciatica, etc.). Louis J. Pons.
131 Diagnosis; an Illustration. William H. Burgess.
132 Grindelia Robusta; Best Way to Use Quinin, etc. J. A. Burnett.
133 Podophyllum Peltatum. Andrew J. Mann.
134 Astringents in Summer Complaint. William F. Waugh.
135 Iron and How I Use It. Ben H. Brodnax.
136 Preventive Medicine. Silas Hubbard.

Medical Bulletin, Philadelphia.

August.

137 Paralysis Following Typhoid Fever; Tobacco Poisoning. John V. Shoemaker.
138 Suppuration of the Antrum of Highmore. E. B. Gleason.
139 Cesarean Section Indicated in a Face Presentation with Chin Directly Posterior. W. Frank Haehnlen.
140 The Treatment of Some Phases of Gastritis. George W. Pfromm.
141 Malignant Endocarditis. Albert E. Roussel.

Atlanta Journal Record of Medicine.

August.

142 The Prevention of Diarrheal Diseases in Infants. Robert W. Hynds.
143 Report of Interesting Operative Cases at Presbyterian Hospital. E. C. Davis.
144 The Action on Mucous Membranes of Silver Salts, with Especial Reference to Some of Their New Organic Forms. Arthur G. Hobbs.
145 Phrenology and Life Vocations. E. G. Ferguson.

Memphis Medical Monthly.

August.

146 Medical Organization and the Mission of the County Medical Society. James S. Rawlins.
147 Malignant Diseases of the Larynx. Richmond McKinney.
148 Therapeutic Value of the Roentgen Rays. William Krauss.
149 Traumatic Meningitis. Robert W. Tate.
150 Treatment of Menstrual Derangements. J. Smithline.
151 Malarial Hematuria. W. S. Robinson.

New England Medical Monthly, Danbury, Conn.

August.

152 *The Erotopath in Society. Charles H. Hughes.
153 Practical Experiments in the Treatment of Anemic Conditions. Fritz Euler-Rolle.
154 Investigations of Antistreptococcus Serum. F. Meyer and L. Michaelis.
155 *Medical Education in the United States. Frank Billings.
156 A Novel and Efficacious Method of Treatment in a Case of Typhoid Fever. Honore J. Cote.
157 On the Disinfectant Value of Kresamin (Ethylendiaminetrikresol) and Its Therapeutic Employment in Diseases of the Skin. Heinrich Eckstein.

152.—This article has appeared elsewhere. See THE JOURNAL, xl, title 66, p. 738.

155.—This article appeared in THE JOURNAL, xl, p. 1271.

Oklahoma Medical News, Oklahoma City.

August.

158. Etiology of Arthritis Deformans. H. B. Decherd.
159 Vesico Vaginal Fistula. A. K. West.
160 Gonorrhea in the Female. G. W. Taylor.
161 Dysmenorrhea. Y. S. M. Roberts.

Occidental Medical Times, San Francisco.

August.

162 Some Clinical Chest Cases, with Fluoroscopic Reports. C. Miner Cooper.
163 The Treatment of Thoracic Aneurism by the Introduction of Wire and Galvanism, with the Report of a Case. Raymond Russ.
164 Indications and Counterindications for Prostatectomy. Louis Bazet.
165 Acute Suppurative Osteomyelitis. Emma S. Merritt.
166 Ascites Due to Syphilitic Cirrhosis of the Liver Treated by Epiplopexy. (Continued.) Minora E. Kibbe.
167 Homo Delinquens. Knud Pontoppidan.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

The Lancet, London.

August 15.

1 *The Causes, Prevalence and Control of Pulmonary Tuberculosis. (Continued.) H. Timbrell Bulstrode.
2 *Infantile Scurvy. W. S. Colman.
3 *The Action of Hemolytic Sera. Robert Muir.

4 A Problem in Medicolegal Psychology. J. S. Mackintosh.
5 A Rare Case of Intestinal Obstruction Resulting from a Kick in the Right Iliac Region. Gilbert Kempe and E. Kempson Brown.
6 *Results Obtained at Mundesley Sanatorium in the Treatment of Pulmonary Tuberculosis. F. W. Burton-Fanning and W. J. Fanning.
7 *The Treatment of the Summer Diarrhea and Vomiting in Infants. H. T. Hicks.
8 *Successful Treatment of Sporadic Dysentery by Aplopappus Baylahuen. William Fingland.
9 A Case of Traumatic Tetanus Treated with Antitoxin; Death. H. S. Elworthy.
10 The Treatment of Congenital Phimosis. J. F. Woodyatt.

1. **Milroy Lecture on Tuberculosis.**—In concluding this series of lectures, Bulstrode states that England has about sixty institutions, public or private, at which cases of pulmonary tuberculosis may be accommodated. The number of beds is probably under 2,500, outside of workhouses and infirmaries. He describes four typical sanatoriums in detail, with their workings. The one at Westmorland has accommodations for 24, and 21 of the beds have been appropriated by various local authorities in the county at a rate of about $300 (£60) per annum for each bed. As these are never all filled, "outsiders" are taken in at a charge which provides a slight margin of profit. The usual length of stay in the early cases is twelve weeks, in the moderately advanced eighteen weeks, and in the quite advanced cases twenty-four weeks. The curative value of the institution is diminished by the presence of the advanced cases which, although staying some six months in the institution, are of but little use, in a working sense, thereafter. Of the 91 patients treated during the last two years, 53 are at work, 17 at home and 21 have died. This includes 45 "cavity cases" and 46 "consolidation cases." He gives statistics to show that the expense to the state would be much less if incurable cases were placed in separate institutions. He advocates as the most important measures for the control of pulmonary tuberculosis as a matter of public health: 1. The education of older children in the principles of health and the periodical physical examination of all school children, with a view of improving the health of those prone to tuberculosis, or who may already be suffering from the disease in an unrecognized, though not unrecognizable, form. The direct and indirect results which would accrue from this would soon make themselves felt in the direction of an unwillingness on the part of people to occupy slums or to dwell in places where the sun rarely penetrates. It would also result later in the election of representatives who would be more alive to the importance of the public health aspect of their duties than is always the case at present. 2. Some such system of compulsory insurance against sickness and invalidity as obtains in Germany and which, it is important to note, makes for the provision of sanatoriums, the support of those threatened with illness and the general well-being of the poorer classes. 3. Better housing and improved conditions of employment of the working classes.

2. **Infantile Scurvy.**—Colman thinks that certain toxic substances may be formed in milk by the various modes of preparation, or in other provisions, which may favor the occurrence of hemorrhagic lesions. The products of decomposition (not necessarily offensive) are possibly subordinate factors in the production of scurvy, although the essential one is the absence of sufficient fresh vegetable and animal food. The treatment in children consists solely in rectification of the diet, for which he advises, in addition to fresh milk and cream, a potato soup made by cooking a potato without peeling, passing it through a sieve and then pouring over it a cupful of boiling milk and adding a little sugar if the child likes it sweet. The limbs should be placed between sandbags if badly swollen, to keep them from being moved, or the hand and forearm may be bandaged to the side. Treatment of accompanying rickets should be postponed.

3. **Action of Hemolytic Sera.**—Muir's research was undertaken in order to study more closely than has been done the combined relationships of the immune-body and the complement, and the possibility of dissociating these substances singly or together after they have combined. The sera used in most of the experiments were those of rabbits, immunized against the red corpuscles of the ox. He found that the immune-body and the complement differed markedly from each other in their mode of combination and the firmness of union. The immune-body can be in part separated before hemolysis from red corpuscles containing multiple doses, but the complement after its union with the cells can not be separated again.

6. **Sanatorium Treatment of Tuberculosis.**—Burton-Fanning reviews two years' experience at the Mundesley Sanatorium, and reiterates the importance of the early recognition of pulmonary tuberculosis. If adequate measures are taken in the very earliest stages of the malady we may hope to restore some 75 per cent. of our patients to more or less lasting fitness for work. In about 90 per cent. of these favorable cases the disease is sufficiently mastered to allow of the patient's life being indefinitely prolonged, but the maintenance of his ascendancy over the bacillus depends on his living by rules based on careful observation of individual requirements and powers. He must expend in other ways no more energy than can safely be spared by the forces required to keep his malady in check, and he must take no liberties with health. The supreme importance of these and other principles of sanatorium treatment is apt to be lost sight of by those who rely on mere change of climate in the treatment of consumption.

7. **Summer Diarrhea and Vomiting in Infants.**—Hicks believes that babies with this summer complaint suffer and die mainly from thirst. Their intestines extract water from the circulation and the circulation from the tissues, while the fluid supply is cut off by the damaged alimentary canal refusing to tolerate the input. All treatment then is directed against the cause, to clear out by the least irritating means the toxins which are the primary cause, and at the same time to introduce a fluid that can be retained and absorbed. Drugs have shown themselves to be of very doubtful assistance in his experience with one exception—oleum ricini, and this seemed most effective given in one initial aperient dose followed after a day by a course of from six to eight six-hourly dram doses of the mistura olei ricini, B. P., with the addition of sodium bicarbonate 2 grains to each dose. Ordinary cases generally respond to the following treatment: After a warm bath, with the child's head hanging over the side of the cot, the stomach is washed out with slightly alkaline water. When this comes away clear, there are passed down the tube one dram of oleum ricini and an ounce or two of albumin mixture with a dram of beef juice or raw meat juice. If the food is rejected small quantities are given even as frequently as a dram every quarter of an hour. If the baby continues to be sick the beef juice is omitted, and if vomiting still persists, all feeding by the mouth must be stopped and intracellular infusion of normal saline solution adopted. In the severe cases the saline solution is commenced at once, about four ounces every six hours with—if absolutely necessary—the addition of a very little brandy. Infusion of a small amount is more beneficial than one of half a pint or more, and it is important to infuse extremely slowly; washing out of the stomach must be left until the patient's condition permits it, but small enemata of normal saline solution have proved decidedly beneficial. If brandy has to be ordered it is administered hypodermically. Babies are bathed twice a day, moving them as little as possible. Except for the bath the baby is kept in absolute seclusion in a curtained bed. Another point in treatment is the thorough scrubbing and disinfecting of the nurse's hands after having attended to the infant. By infecting the food with even the smallest particle of fecal matter, the sickness, which has just been stopped with great difficulty, may be started again. Another experience which he has had in obstinate cases of habitual vomiting is that some infants will not reject their food if it is introduced by the nasal tube. The formula for the "albumin mixture" mentioned is: To the beaten whites of two fresh eggs, one pint of cold, sterile, normal saline solution is added, the whole then stirred and strained through muslin. In chronic cases he has found a malt soup very satisfactory. This is made by mixing 13 drams of wheat flour with 12 ounces of cow's milk, straining through a hair sieve. In another vessel 3 ounces, 2

drams of extract of malt are dissolved in 24 ounces of water at 122 F. and to this is added 2.5 drams of an 11 per cent. solution of potassium carbonate. The two preparations are then mixed and boiled up quickly. Babies can be kept on this food for three weeks.

8. **Dysentery Cured by Aplopappus Baylahuen.**—Fingland describes three cases cured by an extract of a plant indigenous in South America, called locally hysteronica. It belongs to the class of balsams. The curative effects of the drug were so conspicuous that he believes it is liable to prove a specific for sporadic dysentery.

British Medical Journal, London.

August 15.

11 *An Inquiry Into the Relations of Vaccination to Infant Mortality and Acute Concurrent Infantile Diseases. J. M. MacKenzie.
12 Security of Tenure of Office of Sanitary Officers. Joseph Groves.
13 The Appointment of a Minister of Public Health. Frank G. Bushnell.
14 *Physical Degeneration in Children of the Working Classes: An Inquiry Into Its Causes and Suggestion for Its Remedy. Herbert H. Tilswell.
15 *Three Cases of Excision of the Cecum. F. T. Paul.
16 A Case of Purulent Pericarditis of Unusual Duration in a Child. J. A. Coutts.

11. **Relation of Vaccination to Infant Mortality and Acute Concurrent Infantile Diseases.**—Mackenzie tabulates the statistics of 987 infants less than one year old living and dying in a certain district. Of this number 706 had been vaccinated. The tables show that the death rate among the unvaccinated, especially in the early months of infant life, was far in excess of that among the vaccinated. He does not claim that vaccination will keep babies alive, but the facts demonstrate that it does not kill them. The probable explanation of the lesser mortality is that the weaklings are not vaccinated. Experience has shown also that the vaccinal process acting concurrently with another disease is modified in its onset and ushered in by no shock. There is nothing to be observed corresponding with the rigors of adults or the convulsions of infants at the onset of acute disease, and the general course is milder. Measles, scarlet fever, whooping cough and influenza seem to be favorably modified by the vaccinal process, while the latter is unusually mild. In cases of congenital syphilis the pocks were slower in their development, and took longer to scab and heal up. Contrary to the other diseases, the influence of zymotic enteritis seems to be unfavorable. Unsanitary dwellings, overcrowding and filthy habits are immensely more dangerous to the recently vaccinated than the presence of such diseases as scarlet fever, measles, whooping cough and influenza. Mackenzie has also noticed that vaccination is liable to excite dormant eczema and impetigo. Ill health, particularly anemia, is a very common cause of insusceptibility; let anemia be corrected and the child will soon be successfully vaccinated. He concludes with the question which he does not attempt to answer: Granted that acute concurrent diseases modify the vaccinal process, tone down the symptoms and delay the evolution of the pock, does it follow that in these cases it also modifies the protection which vaccination affords?

14. **Physical Degeneration of Children of the Working Classes.**—Tidswell affirms that the standard of health among the school children in the large towns of England is not so high as it ought to be at the present day, considering the advances in sanitation, etc. He says that he has frequently been impressed with the expressions of the children coming out of school. Only a few had an expression of joy and happiness. The majority had a sad, careworn, haggard look, suggestive of mental strain. He urges systematic medical inspection, a medical officer attached to each school, who shall inspect each class as it assembles to detect infectious or other diseases in the early stage, who shall examine the eyesight, hearing and general condition of each child and keep a report of the same, who shall visit any pupil at home in case of sudden illness and give certificate to same. In the end such a measure would be true economy; it would save a vast amount of suffering and help to raise the standard of national health.

15. **Excision of Cecum.**—Paul operated on 3 out of 6 cases of cancer of the cecum observed since Christmas. Nearly all the cases of chronic stricture of the large bowel, in his experience, have been at one time regarded as cases of stomach derangement, sometimes even when the stricture was in the rectum. The earlier symptoms are dyspeptic in character and vomiting after food is not infrequent. Later, when colic is marked, the intestinal origin of the mischief should be apparent, though it is often not recognized until obstruction occurs. The recognizable symptoms really depend on the amount of obstruction offered by the growth and its detection on palpation. Obstruction more than trebles the danger in colectomy. The location of the tumor is rendered difficult or impossible, operation is prolonged and impeded, and the chance of infecting the peritoneum is increased, in addition to the depressing effect due to the absorption of toxins developed in the bowel during the period of obstruction. To have a fair chance the surgeon should undertake the resection before obstruction supervenes. The cut end of the colon sometimes sloughs from interference with the circulation from removal of the mesentery, and this is a strong argument in favor of bringing out the ends of the bowel and establishing a temporary artificial anus. He used to suppose that enlarged mesenteric glands in the vicinity meant an ultimately hopeless prognosis, but two of his patients who presented them are still in good health, one after two and a half and the other after four and a half years. In conclusion he describes his last three cases and a new clamp for removing the spur. The blades are 3 inches long, curving out at the ends, and the compressing force is regulated by a spring and screw nut. The slough is produced in twenty-four to forty-eight hours.

Revue de Chirurgie, Paris.

Last indexed XL, p. 1470.

17 (XXIII, 5.) *Varices lymphatiques au cours de la grossesse. T. Tuffier.
18 Désarticulation de la hanche pour sarcome du femur. Technique opératoire. E. Quénu and Desmarest.
19 *Résultats des opérations libératrices du nerf radial à la suite des fractures de l'humérus. P. E. Launois and F. Lejars.
20 *Les occlusions intestinales par coudure de l'angle colique gauche. L. Berard and M. Patel.
21 *Du traitement opératoire des plaies du diaphragme. C. Lenormant.
22 *De la dilatation dite idiopathique du gros intestin. P. Duval.
23 (No. 6.) Des atrophies osseuses calcaires consécutives à un traumatisme. A. Imbert and J. Gagnière.
24 De la diminution de la distance sterno-crico-idienne comme signe d'effacement de la colonne cervicale. A. Fasquelle.
25 Fibrome du corps thyroïde. X. Delore.
26 *Method of Reaching Abscess in Liver. P. Mendes.—Sur un procédé pour aborder les abcès sousdiaphragmatiques du foie.
27 Un cas de cyste du pancréas avec remarques sur la pathologie et le traitement chirurgical. C. G. Cumston.
28 La chirurgie au Congrès de Madrid.
29 (No. 7.) *Actinomycose du foie (of liver). M. Auvray.
30 Contribution à l'étude de l'exclusion de l'intestin. Vautrin.
31 Calculs biliaires dans le canal cystique, dans le canal choledoque et dans l'épaisseur de la paroi antérieure de la vésicule biliaire. M. Peraire.
32 Gangrènes et phlegmons gazeux sans vibrion septique. J. Régnault.
33 Contribution à l'étude des ruptures de l'urèthre male, surtout au point de vue de leur traitement. De Vlaccos. Four cases.

17. **Lymphatic Varices During Pregnancy.**—Tuffier relates a case of a lymphangioma in the right inguinal-crural region in a woman of 40, in the fifth month of pregnancy. The tumor had rapidly increased in size, and knowing the almost fatal gravity of infection of lymphatic varices he extirpated the tumor under spinal cocainization by his present technic (using a 12 per cent. solution diluted in the cerebrospinal fluid). Two small, transparent vesicles were discovered in the region six months later, relics and testimony, he considers, of a preexisting ectasia of the lymphatics, which under the stress of the pregnancy had developed into large varices.

19. **Results of Operations Liberating the Radial Nerve After Fracture of Humerus.**—Launois and Lejars describe and illustrate a case in which the radial nerve was enclosed in a sheath of new bone formation, entailing paralysis, hard edema and painful contraction of the hand. An operation to free the nerve was undertaken four months after the fracture, and function was gradually restored, the cure being complete by the end of eight months. Blencke has recently published statistics of 68 similar operations to liberate the radial nerve after heal-

ing of a fracture. In 41 the cure was complete; in 6 nearly so; in 8 there was marked improvement, and in 3 slight improvement. In only 7 cases were the results negative. In 3 the outcome was not known. This is a proportion of cures or improvements in 58 cases, or 85.3 per cent. Intervention should be early, although excellent results have been obtained even at a late date. If neuritis develops or a sclerous perineuritis, the longer the delay the more serious the resulting injury of the nerve. Another reason for operating early is the progressive atrophy of the muscles, stiffness of the joints and trophic disturbances which constantly progress. It is advisable to undertake massage and exercises of the joints when first seen, without waiting for the operation. A long interval elapses after intervention before any result is apparent. Usually from four to six months passes before restoration of function, after either liberation or suture of the nerve. The patient should be warned that he will not note any difference before six months, and even later than this, success should not be despaired of. Polaillon's patient was operated on six weeks after the injury, but voluntary movements were not possible until two years later, and the arm then regained its normal strength. Blencke's personal case seems to be a remarkable exception to this rule. On account of a typical radial paralysis, four months after the fracture the nerve was exposed. It was found encased in cicatricial tissue, which pressed it against a projecting point of bone. It was liberated and the surface of the bone leveled, with almost complete restoration of function in forty days. The operation should remove all traces of the fibrous sheath, cicatricial tissue or bone growth encroaching on the nerve. The bony canal in one case was 5 cm. long, in another 4 cm. In Blencke's statistics the nerve was torn across in 12 cases; in 10 it was sutured, with complete success in 7 and improvement in 2 others. Restoration of function was complete after two months in 1 case; after seven in 1; nine in 1; ten in 2; a year and a half in 1, and two years in 1. Trendelenburg found the gap between the stumps too long for suture in 3 cases, and brought them together by shortening the humerus. In one instance the gap was 7 or 8 cm., and he resected 5 cm. of the bone "en escalier"—staircase fashion, after which the bone and nerve could be sutured without difficulty. Function was restored after ten months. In the 2 others the nerve was not torn, but was so degenerated that a segment of 4 to 6 cm. was excised. The results were equally fine in one case, but sufficient time has not elapsed in the other for complete restoration. Wölfler has reported a similar operation with no benefit nearly three months afterward, but complete motor restoration was realized by the end of the second year. The cicatricial focus must be excised, as recurrence is liable. Wölfler had to operate three times on one of his patients. Final success was attained after enveloping the nerve in strips of epidermis taken from the thigh. Launois does not approve of the introduction of a foreign body to protect the nerve, believing that better results will be obtained by extensive extirpation of the cicatricial focus. Ollier used to advocate detaching a strip of periosteum where the bone approaches the nerve. It may be advisable to level the bone or chisel a groove in it. Reisinger has in 2 cases sucessfully transferred the nerve to a groove in the soft parts. In one instance he cut a flap in the triceps and brought it down over the nerve, in the other he hollowed out a groove in the muscle and, after placing the radial in the groove, sutured the two edges above it. There was suppuration in one case with expulsion of several sequestra, but by the end of eleven months functional restoration was complete.

20. **Occlusion of Intestine from Kinking of Left Angle of Colon.**—Berard and Patel have observed at Lyons a case of occlusion of the intestines caused by sinking down of the colon each side of the left angle, which was held in place by the ligaments. As the gut droops the angle, instead of being rounded, becomes sharp and the gut folds on itself, almost or entirely closing the lumen. The lesser the width of the suspending ligament the sharper the angle becomes. Pain at the seventh or eighth rib seems to be the only sign which indicates an obstruction at this point. If the occlusion is not total, injections of oil and other medical measures may relieve, and the symptoms sometimes subside after a copious evacuation of the bowels. To avoid recurrence, the stools should be regulated, and as there is usually general enteroptosis and nephroptosis a large, double, well-fitted Glénard belt may be found useful. In one of the two personal cases described this belt is proving a true medical colopexy, removing all disturbances from this cause. In case of a laparotomy for occlusion if no neoplasm or constricting bands are found, this essential occlusion at the splenic angle should be thought of. When discovered it may be cured by lateral entero-anastomosis or colopexy, or both combined. Two other cases found in the literature are also cited.

21. **Treatment of Wounds of Diaphragm.**—Whenever there is a probability that the diaphragm has been involved in a wound, it should be opened up through the thorax and the wound sutured. By this simple intervention hernia later is prevented. Lenormant has thus treated 2 patients and tabulates 8 others treated by a laparotomy and 21 operated on by way of the pleura like his own cases. There were 5 deaths in the first group and only 3 deaths among the 23 in the second group. He gives the details of the entire list of 31 cases.

22. **Idiopathic Dilatation of Large Intestine.**—Duval is prosector at Paris and his extensive monograph is concluded from the March and April numbers. He has collected 48 cases of Mya's congenital megacolon, Hirschsprung's disease, or idiopathic dilatation of the large intestine as it is variously called, including some that have been published in this country. In 4 the condition was congenital and in 38 it dated from early infancy. In 5 only it was noted later, at the age of 15, 24, 32 or 50 and "in an adult." The colon in Formad's case contained 47 pounds of fecal matters; in Fütterer's the colon measured 66 cm. in circumference and had a capacity of 16 liters. Medical treatment should be perseveringly attempted, large daily injections carried into the colon and purgatives avoided except possibly oil. Electricity and massage may be useful, but only one case is on record in which daily stools were obtained by these measures. Hirschsprung reported benefit after six months. Failures are frequent. In the 15 cases in which surgical intervention was attempted 4 deaths occurred. Colopexy proved successful in 2 out of 4 cases in which it was tried, colectomy in 2 out of 5, and colostomy in 2 out of 4.

26. **Method of Reaching Abscess in Liver.**—Mendes reports a case cured by evacuating the abscess in the liver by a parapleural transdiaphragmatic operation. He recommends this method as allowing perfect drainage while absolutely avoiding immediate pneumothorax and infection of the peritoneum. He turned back a flap of bone and soft parts corresponding to the seventh interspace, and then resected the eighth and ninth ribs. The pleura was detached and pushed out of the way and the exposed diaphragm was incised for 5 cm., allowing the escape of 423 gm. of pus. The parts were swabbed and two large drains carried into the focus. The drains were expelled by the ninth day and the last traces of the wounds healed in less than a month.

29. **Actinomycosis of Liver.**—Auvray states that potassium iodid has failed to benefit the cases of actinomycosis of the liver that have been published, but still it should always be given a trial, using as much as 6 to 10 gm. a day. In 6 cases an operation was undertaken, in 4 a laparotomy, a lumbar incision in 1, and through the thorax in another. None of the patients were saved.

Beitraege Zur Klin. Chirurgie (v. Bruns'), Tuebingen.

Last indexed XL, page 288.

34 (XXXVII, 1-2, Esmarch Festschrift.) *The Wounded in the Wars of the Fifteenth and Sixteenth Centuries. C. Brunner.—Die Verwundeten der alten Eidgenossenschaft.

35 *Curvature of Leg After Resection of Knee in Children. F. Hofmeister.—Die Verkrümmungen des Beines nach Kniegelenksresektion im Kindesalter.

36 *Involvement of Appendix in Hernia. B. Honsell.—Isolierten Brucheinklemmung des Wurmfortsatzes.

37 *Primary Cancer of Extremities. M. v. Brunn.—Ueber den primären Krebs der Extremitäten.

38 *Relations Between Suprarenals and Growth. P. Linser.—Beziehungen zwischen Nebennieren und Körperwachsthum, besonders Riesenwuchs.

39 Fibroma in Jaw. C. Blauel.—Ueber zentrale Kieferfibrome.
40 *Pseudo-Appendizitis. H. Küttner.
41 *Healing of Tendon Wounds and Defects. R. Seggel.—Histologische Untersuchungen über die Heilung von Sehnenwunden und Sehnendefekten.
42 *Permanent Healing of Unpedunculated Skin Flaps. W. Braun.—Dauerheilung von ungestielter Hautlappen.
43 *Gastrointestinal Surgery. H. Lindner.—Zur Magendarmchirurgie.
44 *Resection of Large Intestine at Several Sittings. Goeschel.—Mehrzeitige Resektion des Dickdarms.
45 Zur Pathologie und Therapie der Revolver-Schuss-Verletzungen. Ossig (Breslau).
46 Plastic Operations for Defects in Skull. v. Hacker.—Ersatz von Schädeldefekten durch unter die Kopfschwarte verschobene und umgeklappte Periost-Knochen-Lappen bezw. Periost-Lappen.
47 Zur Technik der Operation grösserer Hämangiome und Lymphangiome. W. Müller.
48 Serofibrinöse Peritonitis nach akuter Enteritis, durch Laparotomie geheilt. O. Langemak.
49 Invagination of the Appendix. D. Ackermann.—Ueber die Umstulpung des Processus vermiformis und ihre Beziehung zur Intussuszeption.
50 Cyst-Formation in Tumors. E. Ehrich.—Ueber glattwandige frische Cysten in Geschwülsten.

34. **The Wounded in the Wars of the Fifteenth and Sixteenth Centuries.**—Brunner's article is a comprehensive illustrated, historical review of the treatment of the wounded and of military medical and surgical affairs generally in the various campaigns of Europe before 1600. His facts and illustrations are derived from old chronicles, paintings, frescoes, stained glass windows, etc., and form a most interesting portrayal of the conditions then prevailing. The wounded were abandoned to the conquerors. The first attempt to depart from this barbarous practice seems to have been by the Swiss at the battle of Marigniano during the early part of the sixteenth century. In their defeat they carried their wounded away with them.

35. **Curvature of Leg After Resection of Knee in Children.**—Hofmeister was able to examine 107 of his little patients from one to seventeen years after resection of the knee. He found severe curvature of the leg in 44 per cent. and medium in 72.7 per cent. Only 16.8 per cent. were absolutely and 27.1 comparatively straight. The tendency to curvature diminished with the age of the subject. Between 3 to 8 the percentage was 64.6 per cent. of severe curvatures, while from 9 to 13 it was only 27.2 per cent. He attributes the curvature and physiologic weakness of the bones to the weight of the body and the traction of the flexor muscles. Prolonged after-treatment is necessary in prevention, and he believes that it would be advisable to detach the flexor muscles from the thigh when knee resection is undertaken on children under 8.

36. **Isolated Involvement of Appendix in Hernia.**—Honsell has observed 4 and collected 79 cases of this condition in the literature. He advocates removal of the appendix under these circumstances, even if sound, as it is liable to be injured and entail appendicitis later.

37. **Primary Cancer of the Extremities.**—Brunn reports from Tübingen a number of cases, bringing the total statistics of the clinic to 46 cases, with 35 per cent. permanent recoveries. Metastasis in the lymph glands is rare, but still sometimes occurs. Several inoperable recurrences were due to this cause. Most of the cancers developed on a chronically inflamed soil, but a few after a single trauma. The right upper extremity was the most frequent site. The number of permanent recoveries is about the same after mutilating and conservative operations, if the successfully operated recurrences are included. He reviews in conclusion 145 cases not included in Volkmann's statistics.

38. **Relations Between the Suprarenals and Growth.**—Linser argues to prove that the thyroid, hypophysis, thymus, suprarenals and sexual glands are intimately connected and may mutually influence and functionally supplement each other. Also, that there is a connection between these glands, and especially the suprarenals, with growth. In giant growth there is usually a tumor in one or more of these glands, while in dwarf growth there is usually hypoplasia or aplasia. He describes 2 cases which apparently confirm this view.

40. **Pseudo-Appendicitis.**—Küttner found the appendix and its surroundings completely normal in 3 cases deceptively simulating appendicitis and operated on after subsidence. He is convinced that such cases occur more frequently than is appreciated. Helminthiasis, colics, oxyurides in the appendix, and gases distending the ileocecal region are liable to simulate appendicitis, and muscular resistance in the region may be due to circumscribed contraction of the rectus muscle. The curative effect of many operations in which the appendix is found histologically sound is probably due, he thinks, to severing of certain nerve branches or possibly only to the rest in bed, change of diet and suggestion.

41. **Healing of Wounds and Defects in Tendons.**—The danger of secondary stretching imposes prolonged immobilization in the treatment of severed tendons or tendon wounds in general. Whether four weeks is enough Seggel considers dubious, from his experience on guinea-pigs. Even forty days are not a long enough interval to ensure safety in functional use of the parts. The tendon sheath plays an important part in the healing which proceeds much more rapidly when the sheath is uninjured. Regeneration of defects does not occur until after reactionary hyperemia, and does not seem to be influenced by the presence of a foreign body, but to be the inherent property of the cells.

42. **Healing of Unpedunculated Skin Flaps.**—Braun shows by the results obtained in several cases that unpedunculated skin flaps may heal perfectly in place and stand the severest strain, as, for instance, on the heel.

43. **Nervous Symptoms Cured by Operation for Colitis.**—Lindner has observed several cases of neurasthenic and hypochondriac conditions entailed by chronic colitis and completely cured by an operation on the colon. He regards them as neuroses from chronic obstipation.

44. **Resection of Large Intestine in Several Sittings.**—Goeschel has operated on 4 cases by this gradual method. One was a carcinoma of the cecum, one of the colon, one of stenosis of the colon by a chronic, hemorrhagic infarct and one a tumor on the adnexa grown to the cecum and appendix. After resection of the intestine he found the continuous bath very useful.

Centralblatt f. Chirurgie, Leipsic.

Last indexed XL, page 1544.

51 (XXX, 19.) *Treatment of Cavities in Tibia and Calcaneus. C. Bayer (Prague).—Zur Behandlung der Knochenhöhlen in der Tibia und im Calcaneus.
52 (No. 20.) Zur Statistik der Ethylchlorid-Narkose. G. Lotheissen (Vienna).
53 Eine neue Säge (saw). V. E. Mertens.
54 (No. 21.) *Mobilisierung des Duodenum und Eingriffe am Gallensystem. H. Lorenz (Hochenegg's clinic, Vienna).
55 *Unilateral Exclusion of Duodenum in Case of Perforating Ulceration on Posterior Wall of Descending Portion of Duodenum. A. A. Berg (New York).—Einseitige Ausschaltung des Duodenum, etc.
56 (No. 22.) *Massage of Heart. D. G. Zesas.—Ueber Massage des freigelegten Herzens beim Chloroform-Kollaps.
57 *Ueber Penis-Amputation. E. Hopmann.
58 (No. 23.) *Die Gastroenterostomie mit Gastrostomie nach Rutkowsky. A. Hammesfahr.
59 (No. 24.) Protection of Patient, Physician and Manufacturers Against Röntgen-ray Injuries. Albers-Schönberg (Hamburg).—Schutzvorkehrungen gegen Schädigungen, etc.
60 (No. 25.) Reply to Berg, Above. M. v. Cackovic (Zagreb, Croatia).
61 *Adrenalin und Lokal-Anesthesie. F. Honigmann.
62 (No. 27.) Retroduodenale Choledochotomie zur Entfernung von eingekeilten Gallensteinen aus dem retroduodenalen und papillären Teile des Ductus communis. A. A. Berg (New York).
63 (No. 28.) Zur Technik der Paraffin-Prothesen. F. Franke.
64 (No. 29.) Eine neue Modification der Maydl'schen Operations-Methode bei congenitaler Blasen-Ectopie (of bladder). J. Borelius (Lund).

51. **Treatment of Cavities in Tibia and Calcaneus.**—Bayer transforms the cavity into a broad shallow groove, pushing back the soft parts to allow the bone to be modeled to the required shape, rounding the sharp edges of the bone on each side of the groove. The two flaps of skin and periosteum on each side are then turned down over the edge of the bone on each side and fitted into the groove, which they cover except for a strip down the center. A roll of gauze is then laid in the groove on top of the turned-over flaps, held in place by a few interrupted sutures taken in the skin, which also draw the flaps closer together. They heal in place under the pressure of the roll of gauze much more rapidly than by any other method of treatment, and the gap in the center of the groove

soon skins over. The outer dressings are not renewed for eight to ten days.

54. **Mobilization of Duodenum for Intervention on Biliary System.**—Lorenz has been testing on the cadaver Kocher's suggestion of mobilizing the duodenum described in THE JOURNAL, xl, p. 613. He finds it simple and easy of accomplishment while the benefit is great, and commends it as a valuable aid for cholecystenterostomy, rendering the latter an easier operation even than a cholecystogastrostomy. It also allows the choledochus to be brought nearer the surface. Its most important use, however, is to allow free access to the retroduodenal portion of the choledochus.

55. **Treatment of Fistula in Descending Portion of Duodenum.**—Berg points out that the lack of peritoneal covering at this point of the intestines renders the repair of a perforating ulcer here a difficult matter. He suggests treating this condition by establishing a gastrojejunostomy and tying off the pylorus with a tobacco-purse suture. This would prevent the escape of chyme through the fistula, while retaining the benefits of stomach digestion. (The priority for this operation is claimed by Cackovic in No. 25.)

56. **Massage of Heart in Chloroform Collapse.**—Zesas states that massage of the exposed heart is theoretically contrary to what we know of the mechanical action and physiology of the organ. In practice, also, no permanent successes have been recorded. He disapproves of it and believes that better results will be attained by devoting the entire attention to the usual measures of resuscitation. About a dozen cases have been reported in which massage of the heart was tried and he adds another to the list, remarking that it dates from the 80's and was thus the pioneer of all. The patient was a robust man of 40 who wished to be relieved of a goiter that interfered with swallowing and breathing, otherwise perfectly healthy. Niehaus was the surgeon. The chloroform narcosis proceeded normally, but, before the operation commenced, the respiration and heart stopped and all measures, including resection of ribs and rhythmical compression of the heart, proved ineffectual to resuscitate the patient.

57. **Amputation of Penis.**—Hopmann describes the success of the Bardenheuer method of amputation as evidenced by a patient seen recently nine years after the penis had been amputated on account of cancroid. There has been no recurrence and the method absolutely prevents stricture. The principle of the operation is to leave the urethra, detached from surrounding tissues, projecting for 2 cm. from the stump. The skin flap is then sutured around the base of the urethra without including the urethral mucosa in the suture. During the healing process the edges of the projecting portion of the urethra curl over outward, thus producing a wide and permanent orifice. Four other cases in which this method has been followed show equally favorable results.

58. **Rutkowsky's Method of Gastroenterostomy with Gastrostomy.**—Hammesfahr has combined these two operations, as suggested by Rutkowsky, and confirms the latter's statements in regard to the simplicity of the intervention and the prevention of the vicious circle. His experience now includes 12 cases of chronic stenosis of the pylorus or an ulcer or carcinoma at this point, operated on by this technic, and he has always been gratified with the results.

61. **Adrenalin and Local Anesthesia.**—Honigmann reports experiences which confirm Braun's announcement in regard to the way in which the addition of adrenalin to cocain immeasurably enhances the anesthetic action of the latter.

Centralblatt f. Gynaekologie, Leipsic.

Last indexed XL, page 1688.

65 (XXVII, 19.) *Treatment of Indentations of Skull in the Newborn. P. Baumm (Breslau).—Behandlung der Schädelimpression bei Neugeborenen.
66 Zur Anwendung des Bossi'schen Dilatators. Jentzer (Geneva).
67 Der Schultz'sche Nadelhalter (needle holder). Schnell (Frankfurt a. M.).
68 (No. 20.) *Zur Physiologie der Befruchtung, Parthenogenese und Entwicklung. A. Schücking (Pyrmont).
69 Ein neues Pessarium zur Behandlung grosser inoperabler Genital-Prolapse. W. Rosenfeld (Vienna).
70 (No. 21.) Beitrag zur Kasuistik der Adenomyome des Uterus. H. Füth.
71 Ueber Fermente im Liquor Amnii. J. Bondi.
72 (No. 22.) True and Simulated Extrauterine Pregnancy. K. Kober.—Zur Frage der wahren und vorgetäuschten Extrauterin-Gravidität.
73 Two Cases of Repeated Tubal Pregnancy. K. Reifferscheid.—Zwei Falle von wiederholte Tubargravidität.
74 (No. 23.) Fracture of Clavicle in Delivery in Head Presentation. N. Muns (L. Meyer's service, Copenhagen).—Klavikularfrakturen Neugeborener bei Geburt im Schädellage.
75 *Buried Circular Ligatures of Vagina in Retroflexio Uteri. A. Schücking.—Versenkte circuläre Vaginalligaturen bei Retroflexio uteri.
76 Extirpation of Pregnant Uterus in Woman Nearly 56. Geyl (Gineken).—Exstirpation der schwangeren Gebärmutter einer nahezu 56 jährigen Frau.
77 (No. 24.) Essential Principles in Protection of Perineum. v. Budberg (Dorpat).—Wesentliche Grundsätze bei Dammschutz und Expression.
78 *Ueber Anesthol, Ein neues Narkoticum. W. Foerster.
79 (No. 25.) *Dependence of Hyperemesis Gravidarum on Hysteria. B. Feinberg.—Die Abhängigkeit der Hyp. grav. von Hysterie.
80 *Retroflexio-Operation. S. A. Alexandroff.
81 (No. 26.) *Ueber Gravidităts-Ikterus. L. Brauer.
82 Ovarian Teratoma Composed Almost Exclusively of Thyroid Tissue. A. Glockner.—Ueber ein fast ausschliesslich aus Schilddrüsengewebe bestehendes Ovarialteratom.
83 Ein neuer Kinds-Perforator. E. Tridondani (Pavia).
84 Welche Maske ist für die Ether-Narkose am empfehlenswertesten? Beaucamp.
85 (No. 27) *Zur Etiologie des Carcinoma vaginæ.. G. W. Maly.
86 Retroversio uteri und Appendicitis. F. Neugebauer.
87 Fall von Cervico-Vaginalfistel. J. Goldenstein.
88 (No. 28.) Eine nach der Küstner'sche Methode operierte geheilte Inversio uteri puerperalis. A. Dienst.
89 Clamping the Uterine Arteries. A. Labhardt.—Zur Henkel'schen Abklemmung der Uterinæ bei Post-partum Blutungen; zugleich ein Beitrag zur Bossi'schen Dilatation.
90 *Kurze Mitteilung zur mikroskopischen Technik der Schnitte (of sections). G. Zepler (Berlin).
91 (No. 29.) Report of German Gynecologic Congress. (Commenced in No. 27.)
92 Ueber Tetania strumipriva einer Schwangeren (in a pregnant woman). A. Dienst.
93 Case of Repeated Fundal-Incisio bei Sectio cesarea. S. Flatau.

65. **Treatment of Indentation of the Skull in the Newborn.**—Baumm has used in 4 cases a small corkscrew to raise the indented portion. The instrument is made specially for the purpose with the turns close together and it is inserted only far enough to hold. The procedure is harmless and has proved effectual.

68. **Physiology of Fertilization, Parthogenesis and Development.**—Schücking relates experiments on echinoderms (*Asterias glacialis, Arbacia pustulosa* and *Strongylocentrotus lividus*), which establish that the processes which induce development of the ovum may be traced to a number of mechanical and chemical actions, and that development is independent of fertilization. He found that the head of the spermatozoön does not bore into the ovum, but becomes surrounded by a hyaline process of the protoplasma and is sucked into the ovum. The development of the ripe ovum is started by absorption of water. Fertilization occurred with spermatozoa placed on the ovum, deprived of their tails. Parthogenesis may be induced by various external stimuli, chemical, thermic or electric light. Relaxation follows the stimulation, and in this stage water enters and starts the development. He found the best medium for the study of parthogenesis to be sea water to which acetic acid had been added in the proportion of one or two drops to 200 gm. sea water.

75. **Circular Ligature of Vagina for Retroflexio.**—Schücking noticed that the uterus in sliding into retroflexion pushes the vaginal wall downward, and reasoned that if the vaginal wall offered a resistance the retroflexion could not occur. He has treated a number of cases on this principle and the results surpassed his anticipations. His technic consists in making a buried circular ligature each side of the portio and in the posterior vaginal vault. He uses silver wire and removes it after four to six weeks, ordering a small pessary to be worn for a time afterward. The procedure is too simple to be called an operation and seldom requires narcosis. The needle is passed around in a circle under the mucosa, emerging at its entering point, or inserted in two semicircles. In large vaginæ he sometimes makes as many as six of these circular sutures. The result is two folds at the side, which hold the portio firm, and a cicatrix in the posterior vaginal vault, which offer a resistance to the pushing down of the vaginal wall indispensable to retroflexion.

78. **Anesthol.**—Foerster commends to his compatriots the method of anesthesia which Willy Meyer described in the last volume of THE JOURNAL, p. 553.

79. **Vomiting of Pregnancy and Hysteria.**—Feinberg relates 2 cases of hyperemesis gravidarum in which he believes the idea of hysteria as the cause of the condition is absolutely untenable.

80. **Retroflexion Operation.**—Alexandroff advocates shortening the broad ligaments as the rational method of remedying retroflexion. He passes a provisional ligature through each of the ligaments, 3 to 3.5 cm. from the collum, and draws them down by pulling on the crossed ligatures. The ligaments thus brought into contact and shortened are sutured together over the anterior surface of the collum, including some of the latter in the suture which must never pass beyond the internal orifice. The uterus retains its entire movability by this operation, while retroflexion is prevented and no disturbances of any kind followed in the cases thus treated.

81. **Pregnancy Icterus.**—Brauer reported a year ago a case in which hemoglobinuria recurred at each pregnancy, and now describes another in which icterus was observed about the fourth month in four pregnancies. In both cases the condition was accompanied by symptoms indicating general derangement, but all vanished after delivery.

85. **Etiology of Carcinoma Vaginae.**—Maly observed a case in which a carcinoma developed in the vagina at the point of greatest pressure from a pessary. It was a ring of soft rubber and had been worn for thirty-nine years.

90. **Microscopic Technic.**—Zepler has found it a great improvement to use an ordinary wire sieve for sections, as it allows a large number at a time to be submitted to the various staining and rinsing procedures. A still further improvement is to use instead of the sieve a white porcelain or glass vessel perforated with numerous small holes. The sections are more easily taken up from this than from a sieve.

Riforma Medica, Palermo.

Last indexed page 471.

94 (No. 22.) *Una forma familiare di paralisi arsenicale. L. Ferrannini.
95 Sulla fisiologia del lobo orbitario (of orbital lobe). Ibid. Experimental study. (Commenced in No. 21.)
96 Nuovo contributo alla chirurgia del sistema nervoso centrale. G. Bendandi. (Commenced in No. 21.) Report of 11 cases operated on.
97 (No. 23.) Sopra un caso di xeroderma genitodistrofico. P. Bueri.
98 *La sinorchidia nelle operazioni conservatrice del testicolo. G. Pascale.
99 *Sopra la determinazione della tensione osmotica del sangue, etc., per crioscopia. G. Ferrannini.
100 *Sulla bacteriuria. L. Ferrannini.
101 (No. 24.) Metabolism of Carbohydrates. L. Ferrannini.—Sul ricambio degli idrati di carbonio. La carboidraturia fisiologica.
102 *Un caso di angina e croup da pneumobacille di Friedländer. E. Cionini.
103 Contributo allo studio della diazo-reazione di Ehrlich. C. di Bernardo.
104 The Toxins in Burns. L. Verney.—Sui veleni delle scottature.
105 (No. 25.) *Sulla patogenesi dell'anchilostomo-anemia. U. Gabbi.
106 *Action of Human Gastric Juice on Tubercle Bacilli. L. Ferrannini.—Azione del succo gastrico umano sui bacilli tubercolari.
107 *Sull' uso del acido picrico nella cura della blenorrhagia uterina. A. Serra.
108 *Organic Balance in Case of Mitral Infantilism. L. Ferrannini. —Infantilismo non distiroideo. Il bilancio organico in un caso di infantilismo mitralico. (Commenced in No. 23.)
109 (No. 26.) *Di un nuovo fenomeno osservato in un caso di malattia di Adams-Stokes. A. Zeri.
110 Dell' azione del nucleo-proteidi sulle cellule del parenchima epatico. G. Guerrini.
111 Corea molle, epilessia coreica e miastenia pseudo-paralitica. L. Ferrannini.
112 L'uretero-uretero-anastomosi con uno speciale tubo di magnesio. D. Taddei.
113 (No. 27.) *La eliminazione provocata del cloruro sodico nei nefritici. F. De Grazia.
114 Cortical Center for Deviation of Head. F. Schupfer.—Sul centro corticale della deviazione del capo e sul centro grafico.
115 Yellow Diazo. C. Gualdi.—La diazo-reazione gialla.
116 Micro-organisms in Lungs in Heart Disease. F. De Grazia. —I microorganismi dei polmoni dei cardiaci. (Commenced in No. 26.)

94. **Family Arsenic Poisoning.**—Three members of the same family reproduced the same clinical picture of paralysis after the entire family had suffered from symptoms of poisoning from arsenic in the flour. The other members recovered without paralysis. It was evidently the result of a toxic neuritis in the mother and two children affected.

98. **Synorchidia in Conservative Operations on the Testicles.**—Pascale has experimented on animals and the results have been confirmed in the clinic, demonstrating that it is possible to unite the two testicles and that a single vas deferens will suffice for both. This retains the gland and its internal secretion and allows the latter to issue by the natural channels, while the parts most liable to be infected by a tuberculous process in the epididymis may be removed. His technic is the systematic resection of the entire tuberculous epididymis and vas deferens on the side affected, leaving the vessels and nerves intact. He then opens up the rete testis and determines the integrity of this part of the gland before proceeding further. This portion of the gland is then implanted on the part of the sound testicle opposite to it, which is very easily done after removing the intertesticular septum. In 4 cases treated in this manner the results have fully confirmed the successes on animals previously published. They establish that the functional activity of a testicle thus implanted on its mate is maintained even after complete extirpation of its vas and epididymis, retaining the vascular and nervous elements. He calls this union "synorchidia" and adds that the vessels in the rete testis of the corpus Highmorianum retain their normal current, as they open at the base of the spermatic lobules, and the current passes through them and the straight tubes to the corpus Highmorianum of the testicle on the sound side, merely doubling the length of the normal route. Scaduto has published good results from implanting the vas deferens in the testicle after ablation of the epididymis, but Pascale thinks that this exposes to greater danger of inoculating the testicle. The indications for this synorchidia are tuberculous or other processes or tumors in the epididymis.

99. **Cryoscopy.**—Ferrannini has been studying the determination of the osmotic tension of the blood and organic fluids by means of cryoscopy, and points out various sources of error in the findings and means to avoid them. He thinks the results will be more harmonious if a standard freezing mixture is adopted, such as ether, the evaporation regulated by a stopcock admitting air, as in Raoult's apparatus, or a mixture of 20 per cent. sodium carbonate with the ice, which ensures a temperature of minus 2.015 degrees C. The fluid to be examined should never be diluted, and the attempt should not be made with a quantity less than 8 c.c. It is immaterial, he has established, whether the blood serum or merely defibrinated blood be used for the test. In the latter case a smaller amount of blood is required. It is important also to have the air in the test tubes dried beforehand to prevent variations from different degrees of evaporation. It is indispensable to stir the fluid while it is congealing, and this vertically. This is done with a glass rod through the stopper of the tube, and in order to ensure the non-admittance of air he has the rod pass through a bag of thin rubber, one end of which is tied to the tube.

100. **Bacteriuria in Animals.**—Ferrannini relates that he found various micro-organisms in the urine of every one of a number of rabbits and dogs he examined.

102. **Membranous Croup from Pneumobacillus.**—The case progressed to a fatal termination uninfluenced by antidiphtheria serum treatment. Large numbers of Friedlander's pneumobacillus were cultivated from the false membranes.

105. **Anchylostoma Anemia.**—Gabbi, three years ago, announced that the blood of subjects with anchylostoma anemia had a destructive action on the red corpuscles of the rabbit. He has found since that this destructive action occurs also with the red corpuscles of debilitated human subjects. The toxicity of the urine is also increased, the alcoholic extract inducing gradual fatal anemia in rabbits. The anemia in anchylostoma infection is due at first to the repeated losses of blood, but is maintained by imperfect regeneration of the blood in the bone marrow and by the slow destruction of the red

corpuscles in the vessels owing to the hemolytic power of the blood serum in this condition.

106. **Action of Gastric Juice on Tubercle Bacilli.**—Ferrannini's experiments with guinea-pigs showed that human gastric juice, even with as much as 2 per 1000 free hydrochloric acid, had no inhibiting action on tubercle bacilli. Tuberculosis followed in every instance after ingestion of bacilli mixed with gastric juice in conditions approximating those in the human stomach.

107. **Picric Acid in Uterine Gonorrhea.**—Serra reports 21 cases of gonorrheal urethritis, with metritis, bartholinitis or vulvovaginitis, including 5 cases in which the gonococci were not found, but otherwise presented the same picture. All were treated with injections of a 12 per 1000 solution of picric acid, and he found the results very satisfactory. It destroys the gonococci and they vanish early if treatment is commenced promptly. The injections are made about twice a week, with a Braun syringe holding 5 c.c.; the fluid is injected into the uterus and the vagina tamponed with gauze removed the next day. His patients were cured with one exception in from ten to forty-five days, and there has been no recurrence since. These intrauterine injections are not irritating, but have a decided analgetic action, and for their other advantages, inexpensiveness, reliability, stability of the preparation, etc., deserve more general adoption. He describes his cases in detail.

108. **Metabolism in Infantilism.**—Ferrannini concludes this long article with its numerous tables with the warning that we must not confound the Lorain type of infantilism with the myxedematous or Brissaud type. The Lorain type may be tuberculous, syphilitic, malarial or toxic in its nature, or what he calls angiodysplastic infantilism. There are two varieties of the latter, the pulmonary and the mitral. In his research on a case of this mitral kind he found the metabolism abnormal in that it corresponded to an age younger than that of the patient.

109. **New Phenomenon in Case of Adams-Stokes Disease.**—The phenomenon which Zeri qualifies as new is that for hours at a time there was perfect synchronism between the pulse and heart beat and the respiratory movements. The heart, the pulse and the inspiration had a simultaneous rhythm. Between the inspirations the tracing of the heart action was nearly a straight line.

113. **Induced Elimination of Sodium Chlorid in Nephritics.**—De Grazia reports tests with five nephritic patients which establish that alimentary chloruria may be a valuable indication of the functional condition of the kidney. In 2 cases of chronic interstitial nephritis the results were different. In one, after ingestion of 10 gm. of sodium chlorid, there was no increase in the elimination of salt the first day, and only a very slight increase the next, while in the other case the kidney was stimulated to eliminate 14 gm. more of the chlorid than ordinary, the amount rising from 17 to 31 gm. The water also increased in proportion and the phosphates and nitrogenous elements. In chronic parenchymatous nephritis the kidney did not respond in any way to the salt taken nor in a case of valvular disease with slight evidences of chronic nephritis. In every instance the kidney responded abnormally to the test.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

RADIUM AND OTHER RADIO-ACTIVE SUBSTANCES; Polonium, Actinium and Thorium, with a Consideration of Phosphorescent and Fluorescent Substances, the Properties and Applications of Selenium and the Treatment of Disease by the Ultra-violet Light. By William J. Hammer, Consulting Electrical Engineer. Cloth. Pp. 72. Price, $1.00. New York: D. Van Nostrand Co. 1903.

KING'S COLLEGE HOSPITAL REPORTS. Being the Annual Report of King's College Hospital and the Medical Department of King's College. Edited by Norman Dalton, M.D., F.R.C.P., Albert Carless, M.S., F.R.C.S., John Phillips, M.A., M.D., F.R.C.P., W. D. Halliburton, M.D., F.R.S. Volume VIII. Jan. 1-Dec. 31, 1901. Cloth. Pp. 478. Price, 7s. 6d. London: Adlard & Son. 1903.

MODERN BULLET WOUNDS AND MODERN TREATMENT, with Special Regard to Long Bones and Joints, Field Appliances and First Aid. Part of the Alexander Essay for 1903. By Major F. Smith, D.S.O., Royal Army Medical Corps. Cloth. Pp. 99. Price, $1.20 net. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1903.

SEVENTH ANNUAL REPORT OF THE MANHATTAN STATE HOSPITAL at New York to the State Commission in Lunacy. For the Year Ending Sept. 30, 1902. Paper. Pp. 106. Albany: J. B. Lyon Co. 1903.

TRANSACTIONS OF THE SEVENTH ANNUAL SESSION OF THE TENNESSEE STATE MEDICAL ASSOCIATION, Nashville, 1903. Cloth. Pp. 320. Nashville: Southern Publishing Association..

ANNUAL REPORT OF THE BOARD OF HEALTH OF THE CITY OF WINONA, MINN. Year Ending March 31, 1903. Paper. Pp. 10.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. Army, under orders from the Adjutant-General's Office, Washington, D. C., for the two weeks ending Saturday, Aug. 22, 1903:

Appel, Daniel M., major and surgeon, having completed the duty for which he was ordered to Denver, will proceed, at the proper time, to San Francisco and take transport to sail from that place not later than Oct. 1, 1903, for the Philippine Islands, where he will report for assignment to further duty.

Gregory, Junius C., first lieut. and asst.-surgeon, is relieved from duty at the U. S. General Hospital, Washington Barracks, to take effect at such time as in the opinion of the commanding officer of that hospital his services can be spared, and will then proceed to San Francisco and report for assignment to duty at the U. S. General Hospital, Presidio.

Godfrey Guy C., captain and asst.-surgeon, now at San Francisco, will proceed to Fort Apache for duty.

Godfrey, Guy C. M., captain and asst.-surgeon, is granted leave of absence for two months.

Hodson, F. A., contract surgeon, is granted leave for two months, to take effect on the arrival at Fort McKenzie of First Lieut. Henry H. Rutherford.

Johnson, Richard W., major and surgeon, is granted an extension of fifteen days' leave.

La Garde, Louis A., major and surgeon, is granted an extension of leave for three months.

Pomeroy, William, contract surgeon, is granted leave of absence for twenty days.

Sinks, E. D., contract surgeon, is granted leave of absence for two months from about September 1.

Wheeler, Lewis H., contract surgeon, is relieved from duty in the Department of Dakota, and will proceed to his home, Westport, Conn., for annulment of contract.

Brechemin, Louis, major, will proceed to Ord Barracks and report at that post for duty, to relieve Captain P. F. Straub, who, on being thus relieved, will proceed to Fort Leavenworth and report for duty.

Brechemin, Jr., Louis, first lieut., will proceed to Fort Baker and report for duty.

Carswell, R. L., first lieut., will report for transportation to the Philippine Islands and, on arrival at Manila, will report for assignment to duty.

De Witt, Wallace, first lieut., is relieved from duty at Fort Porter, and will proceed to Fort Myer for temporary duty.

Ford, J. H., first lieut., is granted a leave of absence for ten days.

Henderson, A. B., first lieut., is granted an extension of leave for twelve days.

Lyster, T. C., first lieut., will make not to exceed two visits each week to New York City on business pertaining to the examination of recruits.

Whitcomb, C. C., first lieut., is relieved from duty at Fort Preble and will proceed to Fort McKinley.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending Aug. 22, 1903:

Surgeons A. G. Grunwell and W. H. Bucher, appointed surgeons from June 20, 1903.

P. A. Surgeon J. C. Thompson, commissioned as such Aug. 10, 1903.

Surgeon F. W. F. Wieber, ordered to the *Prairie* August 21.

Asst.-Surgeon R. E. Riggs, detached from the Naval Hospital, Philadelphia, and ordered to the Navy Yard, Washington, D. C.

Asst.-Surgeon H. L. Brown, detached from the Navy Yard, Washington, D. C., and ordered to the Naval Hospital, Philadelphia.

Surgeon H. G. Beyer, detached from the *Prairie* and ordered to duty as member of a Board on Barracks.

Asst.-Surgeon A. D. McLean, ordered to the *Wabash*, at Boston.

Asst.-Surgeon S. L. Scott, ordered to the Naval Hospital, Chelsea, Mass.

Asst.-Surgeon J. A. Randall, ordered to the Naval Hospital, Norfolk, Va.

Asst.-Surgeon F. G. Abeken, ordered to the Naval Hospital, New York.

Asst.-Surgeon T. N. Pease, ordered to the Naval Hospital, Newport, R. I.

Medical Inspector E. Z. Derr, detached from the *Chicago* and ordered home to wait orders.

Surgeon E. O. Huntington, when discharged from Naval Hospital, New York, granted sick leave for three months.

P. A. Surgeon D. H. Morgan, ordered before a retiring board, September 4, at the Navy Yard, Mare Island, Cal.

Asst.-Surgeon M. V. Stone, ordered to the Naval Hospital, New York, for treatment for a period of six months.